DOCUMENT RESUME

ED 177 262 UD 019 826

AUTHOR Royster, Eugene C.; And Others
TITLE Study of the Emergency School Aid Act Magnet School Program. Final Report.
INSTITUTION Abt Associates, Inc. Cambridge, Mass.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
REPORT NO AAI-78-112
PUB DATE 13 Feb 79
CONTRACT 300-77--0393
NOTE 208p.; For a related document, see UD 019 827; Some tables may be marginally legible due to small print

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS Elementary Secondary Education; *Federal Programs; *Institutional Characteristics; *Magnet Schools; *Program Effectiveness; Racially Balanced Schools; School Community Relationship; *School Integration
IDENTIFIERS *Emergency School Aid Act 1972

ABSTRACT

This study uses a representative sample of eighteen school districts to determine the effectiveness of magnet school programs as a strategy in school desegregation. An overview of issues concerning magnet school programs is provided. The magnet schools in the eighteen districts and their community contexts are described. The relationship of magnet schools to effectiveness in school district desegregation is analyzed. Factors which are associated with the effectiveness of magnet schools are also analyzed. Differences between Emergency School Aid Act (ESAA) funded and non-ESAA funded magnet schools are noted. Recommendations for the conduct of the ESAA Magnet Program are suggested. Appendices include descriptions of the study's methodology, a discussion of data correlation, and tables showing data collected. (EB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED177262

ABT ASSOCIATES INC.
55 WHEELER STREET, CAMBRIDGE, MASSACHUSETTS 02138
TELEPHONE • AREA 617-492-7100

AAI #78-112

Study of the Emergency School Aid Act Magnet School Program

Final Report

Authors: Eugene C. Royster
D. Catherine Baltzell
Fran Cheryll Simmons
with the assistance of:
Karen Ferb

February 13, 1979

Contract No. OE-300-77-0393

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Prepared for:
The Office of Education
Department of Health, Education and Welfare
Washington, D.C.
Robert York, Project Officer

Contract Manager	Quality Control Reviewer	Management Reviewer
Eugene C. Royster	James J. Vanecko	James J. Vanecko

UD019826

EXECUTIVE SUMMARY

AN EVALUATION OF THE EMERGENCY SCHOOL AID ACT MAGNET SCHOOL PROGRAM

1.0 Introduction

Opposition to what is popularly termed "forced busing," combined with declining white enrollments in many urban school districts, has prompted local school administrators, the federal government, and the courts to search for new approaches to school desegregation. The more popular approaches have been based on the concept of "attracting" students rather than "forcing" them to attend desegregating schools. One strategy for attracting students is the magnet school, which is defined by the Office of Education as "a school or education center that offers a special curriculum capable of attracting substantial numbers of students of different social backgrounds" (20 U.S.C. 1619 (9)). In 1976, an amendment to the Emergency School Aid Act (ESAA) provided funds for the development of magnet school programs to provide a voluntary alternative for the desegregation of school districts. However, since little was actually known about the effectiveness of magnet school programs as a strategy in school desegregation, the Office of Education (Office of Evaluation and Disemination) contracted with Abt Associates Inc. to perform a study of magnet schools. Eighteen school districts containing magnet schools were selected as the study sample. Abt Associates visited each site, collected documentary evidence, and interviewed school district administrators, teachers and principals, parents, and representatives of community groups involved in the school desegregation process. At least three magnet schools per site provided information on the school program and program development history and background. From these case studies and documentation came the information used for this evaluation. The results of the Abt Associates study include:

- An evaluation of the overall effectiveness of the magnet school as a desegregation device;
- An evaluation of the conditions for a successful magnet school program; and
- A description of ESAA magnet schools, and other comparison magnet schools, including characteristics of the school districts;
- An analysis of the operations of the ESAA Magnet School Program.

Major Desegregation Findings

Magnet School as a Desegregation Device

Only a limited amount of desegregation can be attributed to magnet schools. However, magnet schools can be an effective desegregation device when used as a component of a comprehensive, district-wide desegregation effort and when used in districts with fewer difficulties for desegregation, such as those with a smaller proportion of minority students.

- Districts within which magnets were most successful for desegregation:

  --had either voluntary or strong court-ordered plans;
  --used magnets as only one component of a more comprehensive desegregation plan;
  --had a history of relatively smooth desegregation;
  --had a smaller percentage of minority students in the district than those less successfully desegregating.

- Magnet schools are not effective as the primary or solitary means of desegregation.

- As part of a comprehensive desegregation plan, magnet schools can assist in increasing district-wide desegregation, although indications are that most of the increase may be due to the effect of other techniques.

- Magnet school programs have a beneficial effect upon attitudes toward desegregation.

- Magnet schools do not resegregate other schools in the district.

Conditions for a Successful Magnet School

Most magnet schools are able to achieve their racial composition and enrollment goals. The most important conditions for a successful magnet school are type of program (curriculum), the school attendance zone served, and the location of the magnet school in terms of the racial composition of the neighborhood.

- Most magnet schools are able to meet their racial composition goals, although some schools achieve their goals at the expense of underenrollment of the projected school population.

- The most important conditions for a successfully desegregating magnet school are type of program, school attendance zone served, and location.

  - At the elementary level, non-traditional programs appeared to be associated more with success.

  - At the secondary level, there are indications that academic programs more easily enroll majority rather than minority students.

  - The more successful schools, particularly elementary schools, have an attendance zone which is more limited. This reflects the continued importance of the neighborhood school.

  - Mixed racial neighborhoods are the most acceptable locations for magnet schools on both the elementary and secondary school levels.

Findings on Magnet School Characteristics

- Elementary (and usually middle) level magnet schools tend to be distinctive because of a teaching approach. Secondary magnet schools are distinguished by their development of a discipline or subject matter orientation.
- Elementary magnet schools are found primarily in residential neighborhoods, both majority and minority; secondary schools are found more in neutral areas, such as business districts.
- Parent participation in magnet schools is very high.
- Magnet schools do provide for an increased chance for the parents to have some control over their child's schooling in a desegregating situation.
- In many districts, administrators successfully used strategic placement of popular teachers and principals to ensure the success of the magnet school.
- Magnet schools are used for a variety of desegregation purposes, including the desegregation of particular geographic areas as well as for district wide desegregation.
- The image of "excellence" determined magnetism more than the school's uniqueness.
- Some minority communities, although pleased with the improved education brought by magnet schools, were resentful because not all of the children in the neighborhood could attend them.
- There was some evidence of "skimming," and of magnet schools becoming "havens" for majority and middle-class students. But there was also evidence of "reverse skimming, "where parents were using magnet schools as a means to give their children with learning or behavioral difficulties a "last chance."

Findings for the ESAA Magnet School Program

The ESAA Magnet School Program funded many school districts with marginal needs for desegregation assistance, thus failing to adequately represent the goals and priorities of the program. This is due in part to the small number of applicant districts with substantial desegregation needs.

- The objectives of the ESAA Magnet School Program are bague and diffuse; as such, they technically allow the funding of magnet school programs for a wider variety of reasons than the expressed purpose of district-wide desegregation.

- There are two criteria for awards of ESAA Magnet Grants: (1) statistical reduction of racial isolation, (2) quality of the proposal. The second frequently overwhelms the first.
- Of the 12 ESAA Grants awarded to districts, a number showed in their proposals, no improvement in desegregation during the project year or were increasing minority group isolation in the project year. Awards were made, also, to districts in which there was very little minority group isolation.
- There was little significant difference between ESAA funded and non-ESAA funded magnet schools.
- ESAA funded magnet schools more often met their racial composition goals, but the ESAA goals are more lenient (e.g., 20-50 percent minority) than those for non-ESAA districts (district average minority enrollment $\pm$ 5 percent).

2.0 Recommendations

- The funding level for the ESAA Magnet School Program should be maintained at its current level, or increased only gradually.

Magnet schools are no panacea for segregation. This study has shown that there is a limited amount of desegregation that can be attributed directly to magnet schools. Many of the districts funded through ESAA have only marginal desegregation needs, thus failing to represent the priorities established by the legislation. However, the study has also shown that magnet schools are successful in achieving their desired racial composition and that they are associated with increased desegregation in many school districts.

We believe that, at this time, not enough is known about their effectiveness in school district desegregation nor about their possible consequences for the districts, the communities they serve or particularly about the effects upon the children. It is too soon to depend on them as a national scale desegregation strategy.

Too rapid an expansion of the program creates the danger that the program will not employ the most effective strategies and that the effectiveness of magnet schools would be falsely assessed. This would be compounded by the development of a constituency in support of an ineffective program.

- USOE should clarify the objectives for the ESAA Magnet School Program.

For the ESAA Magnet School Program to become more effective as an aid to desegregation in local school districts, the program objectives must become more precise. There are at least four different and divergnet objectives stated for the Magnet School Program in the legislation and regulations which provide a justification for the support of a wide variety of magnet school programs. These objectives should be clarified to stress the funding of districts which are 1) in the process of new desegregation; 2) which have a comprehensive desegregation plan (i.e., a plan that covers all grade levels);

and 3) which are able to show how their proposed magnet plan will assist in district-wide desegregation.

- Magnet component programs (those which are one of many strategies used in desegregation) rather than magnet only programs (those which are the major or only strategy used for desegregation) should be given priority for ESAA funding.

This study has shown that magnet component programs are more successful than magnet only programs in assisting in desegregation. Magnet component programs meet the intent of the legislation. Further, the success and utility of magnet schools as the major or only desegregation technique, with the exception of very small programs, have not yet been attempted in a scale large enough to provide us with an understanding of the conditions under which such a program would work. At this time, therefore, support of magnet only programs should be very much on an experimental basis.

- The ESAA Program Office should review its policy of assessing magnet school programs on the basis of district-wide desegregation.

A magnet program should "fit into" the overall design for district desegregation. However, to measure the success of the magnet program in terms of the district desegregation effort does not take account of other desegregation activities, or exogenous factors, which can lead in turn to allow one to unfairly criticize the magnet program for the lack of desegregation movement or, conversely, erroneously give credit to a magnet program when desegregation is really the result of other techniques. We suggest that each proposed magnet program be assessed prior to award in terms of the objectives for which it was designed by the district. The magnet program could be assessed by separate criteria (e.g., was it designed to provide desegregation of a particular neighborhood or area of the city), and the significance of the magnet program to the overall desegregation effort. Such an approach would be helpful not only in the awards process, but would clarify as well the criteria to be used in future evaluations.

- USOE should review the Magnet School Program and its awards criteria in relation to school districts with a high proportion of minority students.

The current awards procedures discriminate against the large districts and against those with high minority populations. Although this recommendation conflicts with the findings of this study which show that magnet schools are more successful in the lower proportion minority districts, we feel that the ESAA Magnet Program should not be inhibited from providing assistance to that group of people and to those school districts most in need.

The federal Program Office should consider remedies to this situation, such as: using the "up to 5 grants" set-aside contained in the regulations for such districts; relaxation of 20-50 per unit minority student composition requirements to allow a higher proportion of minority students to attend ESAA supported schools; and develop a new awards mechanism and criteria for these districts, perhaps based on the impact magnets will have upon specified areas of the district.

The ESAA Awards Criteria

- Statistical criteria should be used to establish a more effective way to meet program objectives through:

  a. Establishing a "threshold" of eligibility for funding; and
  b. Requiring that progress in desegregation in the project year be demonstrated by the district in order to be awarded ESAA magnet funds.

The interpretation of regulations by the ESAA Program Office stresses that magnet funds should go to newly desegregating school districts. Our analysis showed that this criterion was not always incorporated into the awards process. This recommendation is designed to ensure that the intent of the regulations shall be followed. By using the statistical points as a "threshold" device (e.g., all applicants must show some recent desegregation), the districts showing no desegregation will be eliminated. Districts should be able to show, also, that there is desegregation taking place in the project year. If such progress cannot be demonstrated, then the district is neither newly desegregating nor are magnets providing the assistance in meeting the major objective of the program, desegregation.

- Educational criteria should be simplified, and more stress should be placed upon desegregation related activities.

Although the awards process is designed so that the statistical criteria accounts for 56 per cent of the composite score. The points awarded through the educational criteria are in practice the major element (73-100%) providing the basis for the granting of awards. The education criteria are too fragmented and contain criteria which are unnecessary to the magnet program. There are only two factors in the educational criteria related to desegregation activities. Their influence in the awards process should be increased by awarding more points to these activities. In addition, plans for teacher training or for assisting teachers and parents in interracial and intercultural relations should be included.

- An additional point award criterion measuring location of the magnet school(s) and techniques to be used to ensure student enrollment should be added to the Educational Criteria.

This study indicates that location is related to the success of the magnet school in reaching its enrollment and racial composition goals. This factor will impact differently on majority and minority students and families. It is not wise nor possible to require that magnet schools be located in racially mixed neighborhoods so that the area is not a threat to majority or minority students. However, the importance of this factor is such that applicants should be aware of the implications of where the school is located. The applicant should provide plans for attracting students to the school (e.g., strategic placement of popular principals or teachers).

- USOE should review the Magnet School Program and the Regulations with regard to their impact upon the minority community.

As seen by many members of the minority community, the ESAA Magnet School Program is unfair to minorities. They reason that magnet schools are designed primarily to attract whites to stay in the school system and, thus, magnet schools become havens for whites.

The restrictions on the proportion of minority able to attend magnet schools represents an approach which is prejudicial against minorities and which favors majorities. Indeed, the view that majority students will not attend a school of excellence with a minority population of more than 50 percent is seen as support of an "ideology" which continues to denigrate minorities. We suggest that this problem is of sufficient importance to the image of the ESAA Magnet School Program to merit serious concern and corrective action. A possible corrective action would include allowing higher proportion minority enrollments (e.g., 55-60 percent) in selected schools within a school district.

- The ESAA Magnet School Program should more specifically emphasize its role as a desegregation program, and not primarily its educational innovations.

There is an underlying tension between magnet schools as educational innovations or as desegregation techniques, which is found throughthe regulations and in the school districts we visited. In the educational award criteria, educational factors far outweigh the concerns (expressed by the points awarded) given for desegregation activities. There is little in the educational criteria which would guide the school district or the federal program to establish or monitor desegregation activities. It is clear that the motivating force for most of the programs is educational improvement, not desegregation, particularly for teachers and parents. To the extent that the ESAA program does not clarify the priority of desegregation, funds will be provided more for general educational activities than for desegregated schooling.

ACKNOWLEDGMENTS

We would like to express our appreciation to the many people who made valuable contributions to this report. In particular, we thank the superintendents, administrative personnel, principals, teachers, students and parents who allowed us to come into their school district and schools, and who gave of their time, their feelings and their thoughts.

James J. Vanecko was our reviewer, and his critical comments have improved the final report. We thank also Dr. Christine Rossell who provided invaluable assistance in many technical aspects of this study.

We also wish to express our appreciation to Robert York who served as our technical monitor, and we acknowledge with gratitude the many other personnel of the U.S. Office of Education, particularly those of the ESAA Magnet School Program, for their willingness to assist in this study.

Finally, we express our appreciation to the following members of the Abt Associates staff, members of the site teams who accompanied us on the visits to the 18 districts and who gave much of their personal time and expertise to collect the data for this study: Joanna Berkman, Lorelei Brush, Richard Bale, Kay Bonner, Nancy Brigham, Karen Ferb, Judy Ferguson, Ennio Mingolla, Sheila Rosenblum, Margie Schwartz and Jackie Thomas. In addition, we acknowledge the assistance of John C. Larson who helped with the analysis of the data and the assistance of Margie Schwartz and Sandy Margolin who prepared the production of this report.

TABLE OF CONTENTS

		Page
CHAPTER ONE:	AN OVERVIEW OF ISSUES CONCERNING MAGNET SCHOOL PROGRAMS	1
1.0	Introduction	1
1.1	The Public Choice Model	4
1.2	The Conflict Control Model	6
1.3	Unintended and Unanticipated Impacts	7
1.4	Magnet Schools for Desegregation or Education?	11
1.5	Legal Issues	12
1.6	Purpose of the Report	14
CHAPTER TWO:	A DESCRIPTION OF MAGNET SCHOOLS AND THEIR CONTEXTS	16
2.0	Introduction	16
2.1	School District Characteristics	17
2.2	School District Desegregation Factors	19
2.2.1	Desegregation History	19
2.2.2	Desegregation Tactics	21
2.3	Magnet School Program Characteristics	23
2.3.1	General Characteristics	23
2.3.2	Curriculum Characteristics: Type of Program	28
2.3.3	Non-Curriculum Characteristics	32
2.4	Variables of Intrinsic Interest	35
CHAPTER THREE:	SCHOOL DISTRICT DESEGREGATION AND MAGNET PROGRAM EFFECTIVENESS	43
3.0	Introduction	43
3.1	District Desegregation	44
3.2	Correlates of District Desegregation	55
3.2.1	Contextual Variables	55
3.2.2	Community Attitudes	57
3.3	Magnet Program Effectiveness	59
3.4	Correlates of Magnet Program Effectiveness	64
3.5	Assessing the Contribution of Magnets to District Desegregation	66
3.5.1	High District Desegregation and Magnet Program Effectiveness.	69
3.5.2	Medium District Desegregation and Magnet Program Effectiveness	70
3.5.3	Low District Desegregation and Magnet Program Effectiveness..	71
3.6	Summary	73

TABLE OF CONTENTS (cont.)

		Page
CHAPTER FOUR:	MAGNET SCHOOL EFFECTIVENESS AND ITS CORRELATES	74
4.0	Introduction	74
4.1	General Analytic Approach	75
4.1.1	Defining and Measuring Magnet School Effectiveness	75
4.1.2	Identifying Correlates of Effectiveness	77
4.2	General Magnet Effectiveness	79
4.3	Elements of Magnetic Appeal	84
4.4	Major Correlates of Magnet School Effectiveness	90
4.4.1	Type of Program	90
4.4.2	Type of School Location	92
4.4.3	Type of Attendance Structure	94
4.4.4	The Relative Importance of the Major Correlates	95
4.5	Other School Variables Explored as Potential Correlates	100
4.6	Summary and Conclusions	102
CHAPTER FIVE:	AN ANALYSIS OF THE ESAA MAGNET SCHOOL PROGRAM	104
5.0	Introduction	104
5.1	The ESAA Magnet School Program	104
5.1.1	The Enabling Legislation and Regulations	104
5.1.2	The ESAA Magnet Schools Awards Process	106
5.2	Assessment of the Awards Procedures for Academic Year 1977-1978	110
5.3	The Criteria and the Objectives of the Program	113
5.3.1	Statistical Criteria and Program Objectives	114
5.3.2	Educational Criteria and Program Objectives	115
5.4	Other Considerations of Program Objectives and Awards Criteria	117
5.4.1	Awards Criteria and Magnet "Educational Centers"	117
5.4.2	Magnet Schools and Other Desegregation Efforts	118
5.4.3	Magnet Effectiveness and ESAA Awards Criteria	119
5.5	A Paradigm for ESAA Planning	121
5.6	Differences Between ESAA Funded and Non-ESAA Funded Programs	125
CHAPTER SIX:	CONCLUSIONS AND RECOMMENDATIONS	130
6.0	Introduction	130
6.1	Summary of Findings	130
6.2	Recommendations	133
APPENDICES		

LIST OF TABLES AND FIGURES

Table		Page
1.1	Characteristics of Magnet and Non-Magnet Schools.....	13
2.1	Community Characteristics for Eighteen School Districts....	18
2.2	Description of Current Desegregation Plans for Eighteen Districts.....	20
2.3	Description of Magnet Schools and Other Desegregation Techniques in Eighteen Districts.....	22
2.4	1977 Magnet Program Characteristics.....	24
2.5	Percentage of Minority Students Enrolled in Magnet Schools in School Districts in Study.....	25
2.6	Magnet School Characteristics Totals for All Districts.....	26
3.1	1977 District Scores on Three Indices of Desegregation.....	48
3.2	District Scores on $\Delta \frac{Smw}{D}$	49
3.3	Desegregation Effort in Magnet and Non-Magnet Schools as Measured by the Index of Dissimilarity (D).....	50
3.4	Interracial Contact in Magnet and Non-Magnet Schools as Measured by Smw.....	52
3.5	District Rankings on Magnet Program Effectiveness.....	63
4.1	Number and Percent of Magnet Schools for Which Various Elements of Appeal Contribute to Overall Appeal of School.....	85
4.2	Rankings of Correlates as Predictors of Effectiveness, Elementary/Junior High Level.....	96
4.3	Rankings of Correlates as Predictors of Effectiveness, Secondary Level.....	97
5.1	Isolation, Quality and Composite Scores for Funded ESAA Programs.....	111
5.2	ESAA - Non-ESAA Minority Enrollment.....	126

Figure		Page
3.1	Magnet Program and District Desegregation Effectiveness....	68
4.1	Ability to Meet Racial Composition Goals, 1977-1978.....	81
4.2	Percent of Schools Attaining Projected Enrollment by Race for Elementary Schools.....	82
4.3	Percent of Schools Attaining Projected Enrollment by Race for Senior High Schools.....	83

CHAPTER ONE

AN OVERVIEW OF ISSUES CONCERNING MAGNET SCHOOL PROGRAMS

1.0 Introduction

Opposition of the American public to what is popularly termed "forced busing," combined with declining white enrollments in many urban school districts, has prompted local school administrators, the federal government, and the courts to search for new approaches to school desegregation. The more popular approaches have been based on the concept of "attracting" students rather than "forcing" them to attend desegregating schools. The "magnet school," which is defined by the Office of Education as "a school or education center that offers a special curriculum capable of attracting substantial numbers of students of different social backgrounds" (20 U.S.C. 1619 (9)) has become one of those more popular approaches.

The number of magnet schools in our nation's cities has multiplied in recent years. One important stimulus to their growth was the passage in 1976 of an amendment to the Emergency School Aid Act (ESAA). The amendment provided funds for the development of magnet school programs to assist voluntary desegregation of school districts. However, since little was actually known about the effectiveness of magnet school programs as a strategy in school desegregation, the Office of Education (Office of Evaluation and Dissemination) contracted with Abt Associates Inc. to perform a study of magnet schools. The results of the Abt Associates study are presented in this final report.*

Support for the magnet school concept as a desegregation technique has grown despite the lack of information regarding its effectiveness in desegregation and its beneficial impact on communities. Proponents claim that magnet implementation and operation will significantly reduce overall hostility to desegregation by providing quality education in an integrated setting. They claim that, rather than viewing school desegregation as a threat, white parents will consider the course offerings of the magnet school as an opportunity for their children to obtain quality education. Even though the distance magnet

---

* The study, which started in September 1977, was not designed to investigate the ESAA Magnet School Program alone--the first awards were just being made at that time--but to provide information on magnet schools generally and on their employment by various school districts to further efforts at desegregation.

school students are bused may be great (since students may come from all areas of the city), the element of choice defuses opposition to busing. If this reduces white flight, more integration may be achieved in the long run than under a mandatory plan. The proponents further argue that magnet schools surpass regular school programs that are part of a mandatory desegregation plan in providing for contact on an equal basis between minority and majority students, as well as for increased gains in achievement by minority students.

Opponents of the use of magnet school programs for purposes of desegregation argue that such programs are adopted by school districts in order to avoid desegregation. They fear that school districts will employ magnet programs as substitutes for a comprehensive mandatory desegregation program. Since the magnet school program is based upon voluntary actions, opponents fear that school districts will not be forced to implement the range of remedial actions necessary to bring about desegregation. Support for this argument is seen in the fact that magnet schools affect relatively few students in a district; thus, the opponents argue, for magnet programs to be effective they must be one component in a larger desegregation plan. Opponents also express concern because of fears that magnet schools may become "refuges" for middle class children, the result of "skimming" from both the majority and minority community. Critics point out also that the implementation of a magnet school program may cause the non-magnet schools to be perceived as "second class" since magnet schools are publicized as being special and of superior quality.

According to Senator John Glenn, one of the sponsors of the 1976 amendment to ESAA, the ESAA Magnet School Program was not designed to replace other methods of desegregation, but to provide a chance for localities to design a full range of remedies to further meaningful school desegregation. However, magnet school programs have been used to replace other methods of desegregation and have been used in combination with a variety of other methods. Indeed, recent federal court decisions have considered magnet school programs both as components of a mandatory citywide desegregation plan (e.g., Morgan v. Kerrigan, 1975) or as substitutes for a mandatory plan (e.g., Armstrong v. Brennan, 1976). Although public attention is usually drawn to voluntary desegregation programs (as in Tacoma, Houston, and Milwaukee) that serve as an alternative to "forced busing," in fact, magnet school programs often operate as an integral part of "forced busing" or mandatory desegregation programs. It is important to distinguish between these two situations

because the underlying assumptions of the role of magnet school programs and the determination of their effectiveness varies depending on the context within which they are operating. The remainder of this introductory chapter outlines some of the policy issues related to the two models and concludes with a brief discussion of the purpose of this report.

1.1 The Public Choice Model

Where magnet school programs operate as the only desegregation plan, the "public choice" model becomes the dominant rationale for the program. This model presupposes that many, or most, parents make choices on the basis of the curricula offered in various schools. The primary assumption is that parents will evaluate the educational program of the neighborhood segregated school and that of the desegregated magnet school in rational programmatic terms. The corollary assumption is that a sufficient number of parents will be induced to choose the magnet school program because it is educationally more attractive than their present school.

Therefore, the clearest and most pressing policy issues concerning the "public choice" situation--the "magnet only plan"--are the degree to which parents in fact do choose the magnet school over the neighborhood school and the factors affecting that choice. Associated with these are policy questions concerning the type of educational incentives needed, the factors that affect the ability of such magnet schools to meet their racial quotas, and any unintended impacts on the school system.

The assumptions underlying the "public choice" model are questionable. Evidence from the voucher projects in Alum Rock, California (a school district where desegregation was not an important concern of the project) indicates that educational attractiveness, uniqueness, and diversity of program offerings by elementary and middle schools played very little role in parental decisions related to school selection (Weiler et al., 1974). Although all schools in the district had unique program offerings, less than two percent of the families with children in the public schools transferred their children from their neighborhood voucher school to another voucher school outside their neighborhood. Proximity, rather than program, determined their choice.

The experience to date in "magnet only" plans shows little system-wide variance (0 to 3 percent) in the proportion of whites who can be induced by educational incentives to choose a magnet school over their neighborhood school. In Milwaukee, for example, despite a comparatively large reduction in segregation, the program had difficulty in attracting white students out of their neighborhood schools. Only three percent of the white student population opted for transfers to magnet schools. Only two percent

transferred to inner city magnet schools (Sampson, 1976). There is, of course, much greater systemwide variance in the proportion of blacks who will transfer to magnet schools, but that has always been the case with voluntary desegregation programs.

1.2 The Conflict Control Model

The simple alternative to the "public choice" model is the use of magnet schools as part of a mandatory pupil assignment plan so that the options available to parents are either application to a magnet school or assignment to some other desegregated school. Where magnet schools are only one of a series of techniques used in a desegregation plan, as in Pasadena and Boston, the underlying assumptions regarding the effectiveness of the plan may be different. One assumption is that judicial mandate may be necessary to get whites to leave their segregated schools, but that some element of choice, however real, is necessary to reduce hostility and white flight to manageable levels. In Judge Garrity's view, magnet schools in the Boston plan provided that element of choice and served as "an enormous safety valve" (Gallese, p. S14774). This model is thus one of conflict control, in which the main focus is on the degree to which magnet schools are actually able to reduce or diffuse conflict and/or white flight associated with desegregation, particularly where a mandatory plan is involved.

In a situation where a mandatory plan includes magnet schools, parents no longer simply choose between their segregated neighborhood school and a desegregated magnet school. Their choices are (1) to leave the school district, (2) to take the chance that their children will not be reassigned, (3) to accept the forced reassignment to a desegregated school, or (4) to enroll their children in a desegregated magnet school. Not surprisingly, in such situations magnet schools are perhaps the most "successful" aspect of the plan despite the often greater busing distance and numbers bused. In Boston, for example, twice as many magnet schools attained 90 percent of their projected enrollments as did desegregated community district schools. If one breaks that down into black and white enrollment, the magnet schools had more than six times the proportion of schools attaining 90 percent of their projected white enrollment as the community district schools.

However, a policy analyst or school administrator might question whether the additional expense of magnet schools is justified by the reduction in conflict or white flight. Moreover, it would be important to know whether some types of magnets are more successful in reducing white flight than others.

1.3 Unintended and Unanticipated Impacts

Both magnet only and magnet component plans may have similar unintended systemwide impacts. However, some impacts of magnet schools may depend on the type of plan in force.

First, where magnet schools are part of a mandatory desegregation plan, Foster's (1973) criticism that magnet schools segregate other schools may not be applicable. Typically, a magnet school plan within a mandatory desegregation plan is controlled so that the racial balance of each school in the system is projected at the beginning and is more or less guaranteed by a series of "back-up" plans. Projected enrollments are supposed to be balanced among all schools before school opens. Even if magnet schools find it easier to meet their projected enrollment than other desegregated schools, their success will not be at the expense of resegregating the non-magnet schools from which the students were drawn.*

In general, however, the problem of resegregation is greatest in the magnet only plan where there is no control over systemwide balance, and students may be allowed to "flee" a predominantly black school in a changing neighborhood. The evidence from the voucher school project and the differential systemwide participation rates of magnet only plans when compared to magnet component plans both suggest a real possibility: the only time large numbers of white parents will choose any school other than their neighborhood school, at least for elementary students, is when that neighborhood school is desegregated.

It follows, then, that the only reason that some parents might choose a magnet school over their neighborhood school is because their neighborhood school is becoming predominantly minority. Thus, increased integration in the magnet school may be offset by decreased integration in the sending school. This occurred in Baltimore in 1971 when the school district opened two new magnet schools that simply attracted whites fleeing other minority schools (Bowler, 1972). Thus, although the magnet schools opened racially balanced,

---

* This process may not actually work as it is supposed to in some school districts; in any case, Foster's criticism should certainly be tested.

the level of segregation rose in the Baltimore school system from 81.3 to 82.3. Nevertheless, it is also possible that, in both the magnet only and the magnet component plan, those students not allowed to "flee" to a magnet school would eventually have fled to the suburbs anyway.

Second, the problem of "skimming" is a greater policy concern in magnet component desegregation plans than in the magnet only plan. If much of the effect of desegregation is class (Coleman, 1966; St. John, 1975) and there is a greater tendency for middle class parents to send their children to schools outside the neighborhood (Rubin, 1972), then it is possible that magnet schools actually diminish some of the achievement gains that may result from comprehensive desegregation plans by segregating the middle class, both black and white, from the working class. While the three examination magnet schools in Boston and the School for the Gifted and Talented in Milwaukee are outstanding examples of intentional segregation of the brighter students from the less academically able students, it is possible that most magnet schools "skim" to some degree. In communities with magnet only plans, the greatest concern is that these schools deprive the minority community of its best students and thus further "ghettoize" the black community. Therefore, it is important not only to determine if this effect obtains, but also to understand the differential class support for school curricula and teaching styles, the ways in which both can be changed to avoid skimming, and the ways in which ESAA funding may best be used to promote gains in the achievement of students.

It is also quite possible that magnet school programs "skim" teachers as well. It does not seem unreasonable to assume that the better teachers are selected to learn a new, innovative teaching style or classroom organization, or to work within a new school with specialized curriculum. If these teachers come from desegregated non-magnet schools or predominantly minority schools, then these schools are being deprived of the better teachers and an important policy issue must be faced.

The increased busing involved in magnet school programs does not seem to be a problem since the element of choice defuses opposition to busing. The average number of students bused in magnet schools in Boston is 274, while the average number bused in the non-magnet desegregated schools is 175; furthermore, magnet schools have had less trouble meeting their projected enrollments. Indeed, the controversy over busing--busing distances and time spent on the bus

--has always arisen over mandatory or forced busing, not over voluntary programs. Still, the cost of that additional busing, the increased size of the educational bureaucracy, and the cost of new programs may be important factors in determining how large a magnet school program can grow and how much desegregation it can accomplish. At least one school district (Seattle, Washington) has abandoned its magnet school program as too expensive and time consuming, given the small amount of desegregation it has accomplished. The school board has since voted to mandatorily reassign students in the fall of 1978 in order to desegregate the school district.

Despite the small variance among magnet schools in enrollment, the differences that do exist suggest factors which may be affecting parental choice and overall participation. One such factor is the location of the school. Schools located in minority neighborhoods may tend to be underenrolled by whites, and the same pattern may be true for minorities attending schools located in predominantly majority areas.

The grade levels involved might also be a factor in parental choice. We know from the experience of voluntary "majority-to-minority" busing programs that such programs are much more successful at the secondary level than at the elementary level, where parents' concern with their children's safety is greater and parental involvement in issues concerning curriculum is less important. It has been found that white loss associated with desegregation is greater at the elementary level than at the secondary level (Rossell, 1977).

The ability of schools to offer unique educational opportunities may also be a factor. This is complicated by the fact that there is a tendency for elementary schools to be those schools with a special learning style or organization (e.g., fundamental school, open education, Montessori, etc.) and secondary schools to be those with a special curriculum focus (e.g., performing arts, technical skills, college preparation, industrial arts, etc.).

It is possible that schools which draw students from a citywide population may be labeled "magnet schools" for no apparent educational reason. This tendency may be greater at the elementary level, because of the difficulty in instituting different teaching styles or organizations throughout an elementary school. This label, nevertheless, may be important. Understanding the process by which a school acquires or develops a reputation for excellence may be critical in explaining parental choice of one school over another.

Among other variables which may affect the degree to which magnet schools can induce parents to leave their neighborhood schools are the amount of money (including ESAA funding) spent on the magnet schools and the publicity given them. Providing strong administrative leadership and allocating enough development may add significantly to the cost of magnet schools. The Houston plan, including 43 schools, cost an additional $10 million, although in Milwaukee (the most successful "magnet only" plan to date), the additional cost has been estimated to be less than $3.3 million for a plan that was expected to include 27 schools (Board of School Directors, 1976: 43). Levine and Moore argue that, without strong leadership from the superintendent and consensus among educational decision makers, attempts to implement magnet schools will meet with limited success. The degree of publicity given to the magnet schools, the size and location of the attendance zone (e.g., whether it is citywide or from a portion of the city), and the immediacy of a threat of a future mandatory order if the voluntary plan does not work (as in Milwaukee) may also be critical in determining the degree of participation.

1.4 Magnet Schools for Desegregation or Education?

Magnet schools may serve many purposes or be used to serve varied objectives. Educational excellence, the idea at the core of "magnetism," is the focus of a nascent argument. The question is, should magnet schools have as their primary intent the improvement of education or the achievement of desegregation within educational institutions? The two objectives are not mutually exclusive, but the issue is important for funding purposes, particularly on the federal level.

Many educators view magnet schools as a testing ground for educational innovations. Adopting or originating educational innovations remains at the core of a magnet school's unique appeal. A variety of different educational innovations may be tested in a number of different magnet schools, and if successful, can be disseminated to other schools in the district. Indeed, desegregation itself may be an innovation that is transferable to other schools once it has been shown to be attractive and workable in a magnet school. In this light, a magnet school loses its uniqueness if its innovations are adopted by other schools in the system. Thus, for those who view the magnet school as a catalyst for the dissemination of innovation, success comes only with the eventual loss of uniqueness, and the loss of its "magnet" status.

1.5 Legal Issues

Many of the policy issues raised here are of concern to the courts. Because courts have the power to consider factors beyond simple racial balance, a court instituting magnet schools may have to consider whether its programs and personnel are sufficiently "magnetic" and, if not, how they can be improved; whether the placing and number of magnets in the school system exceeds the probable demand; and whether a proposed magnet program is undesirable on grounds other than ineffectiveness (Leubsdorff, 1977). Desegregation plans relying mainly on magnet schools have been ruled unacceptable in Bradley v. Milliken, 484 F. 2d 215 (6th Cir. 1973); Kelly v. Guinn, 456 F. 2d 100, 103-4, 108-9 (9th Cir. 1972); Bivens v. Bibb County Board of Education, 424 F. 2d 97, 98 (5th Cir. 1970); and Dowell v. Board of Education, 338 F. Supp. 1256, 1261-64 (W.D. Okla.).

However, as Leubsdorff (1977) notes, there is the danger that federal judges working under intense local pressure will be tempted to accept novel schemes as alternatives to desegregation. It is therefore appropriate in the light of recent court decisions upholding magnet school plans to obtain information on the workability of such plans. In Brinkman v. Gilligan (Dayton, Ohio) (E.D. Ohio, no. 72-137, March 10, 1975) the Court found the Dayton Public Schools segregated and approved the school district's magnet school plan to integrate the entire school system. Because the Dayton plan placed certain limitations on assignments of students to the magnet schools in order to insure some racial balance, the court could argue that it was not a strict freedom of choice plan.

In Hart v. Community School Board of Education, 512 F. 2d 37, 54-55 (2d Cir. 1975) the Second Circuit Court approved an integration plan which included the magnet school concept. The court recognized that the magnet school concept was workable and the plan under consideration contained certain coercive requirements that prevented it from being a strict freedom of choice plan.

In Ross v. Houston Independent School District, 1975, the Court allowed a magnet school plan which placed certain limitations on reassignments and claimed to be a supplement to the geographic zoning previously ordered by the District Court and the Court of Appeals. It is not at all clear that this is the case, however, and the Circuit Court of Appeals has recently declared the Houston magnet plan to be "inadequate."

One of the more critical legal concerns may be the degree to which magnet school plans, particularly those within mandatory desegregation plans, create a dual system of schools as measured by various indicators of equality. As Table 1.1 illustrates, the level of expenditures, the age of the school, and the pupil-teacher ratios are much more favorable in magnet schools than in non-magnet schools. If a dual system based on race is a violation of the 14th amendment equal protection clause it is not at all clear that a dual system based on educational expenditures and possibly involving segregation by social status is not also such a violation. For example, while the Supreme Court decision in Rodriquez v. San Antonio Independent School District ruled out the possibility federal judicial intervention to overcome expenditure inequalities between school districts, it said nothing about inequalities between schools within a district.

Table 1.1

Characteristics of Magnet and Non-Magnet Schools

Quality Education Indicators	Magnet	Non-Magnet
Average per-pupil expenditure on regular teachers in dollars	843.9	714.6
Average per-pupil expenditure on special instruction in dollars	221.1	184.4
Average per-pupil expenditure on instructional supplies in dollars	64.6	49.5
Average facility age in years	41.8	49.1
Average pupil/teacher ratio	15:1	20:1

(Source: Massachusetts Research Center, Education and Enrollments: Boston During Phase II (Boston: 1976), p. 56.)

1.6 Purpose of the Report

In September, 1977, the United States Office of Education, HEW, contracted with Abt Associates Inc. to conduct a study of the ESAA Magnet School Program. The study had as its major objectives:

1. To describe ESAA magnet schools, and other comparison magnet schools, including characteristics of the school districts;
2. To assess the overall effectiveness of the magnet school as a desegregation device, including the achievement of the magnet school's projected racial composition and the impact of the magnet schools on the racial composition of other schools in the district;
3. To assess the conditions for a successful magnet school program, including the identification of those characteristics which are associated with the greatest effectiveness of magnet school programs; and
4. To examine the operations of the ESAA Magnet School Program, including the federal regulations. application process and award of magnet school contracts.

This report presents the results of the Abt Associates study.

A total of 18 school districts containing magnet schools were selected as the study sample.* Abt Associates personnel visited each site, collecting documentary evidence and conducting interviews with school district administrators, teachers and principals, parents, and representatives of community groups involved in the school desegregation process. At each site, team members visited at least three magnet schools and obtained information on the school program, the history of the development of the program, and other pertinent information. From these case studies and the collected documentation came the information used to assess the study objectives. These data are presented in the following chapters.

In Chapter Two we describe the magnet schools in the 18 districts and the community contexts within which they are found. The description of aspects of the magnet school programs which are of general interest will give the reader a better idea of what magnet schools are like.

---

* A more detailed explanation of the study methodology is presented in Appendix A.

Chapter Three presents the analysis of the relationship of magnet schools to effectiveness in school district desegregation. In this chapter we also investigate those factors which are associated with effective magnet school programs. An analysis of what makes for an effective individual magnet school is the objective of Chapter Four. Here we look at the kinds of activities which have been undertaken to ensure the success of the magnet school.

In Chapter Five, we examine the ESAA Magnet School Program, including the awards process, and note differences which may exist between ESAA funded and non-ESAA funded magnet schools.

Finally, Chapter Six contains the suggested recommendations for the conduct of the ESAA Magnet School Program.

CHAPTER TWO

A DESCRIPTION OF MAGNET SCHOOLS AND THEIR CONTEXTS

2.0 Introduction

The 18 districts in our study and the magnet schools located in them represent a diversity of types and conditions. In this chapter we provide a general picture of the districts and schools as a prelude to our investigation (in Chapters Three and Four) of desegregation effectiveness, magnet program effectiveness, the impact of magnet programs on desegregation, and magnet school effectiveness.

We first describe the characteristics of the school districts in the study.* Such characteristics as size of the community, percentage of minority students, and the population's income, education, and occupational structure may affect the success of desegregation efforts and of magnet programs. We then turn to the desegregation plans implemented in the districts. Information on a district's desegregation history provides a picture of whether the magnet school program is a substitute for or a supplement to other desegregation activities and the extent to which the desegregation effort is supported by the community.** These may be crucial factors in the ultimate success of the magnet school program.

Next we describe the characteristics of the magnet schools, including their curriculum orientation, the attendance areas served, and their "uniqueness" in the district. This information should prove especially useful to policy makers and practitioners. Finally, we discuss some factors which we consider to be of interest in understanding the development, implementation and impact of magnet schools. Our discussion of some of these factors is based upon information obtained from site visit interviews and observations. Firmer conclusions must await a more systematic data collection effort which would provide a more substantial test of their reliability and validity.

---

* Data are based on school district reports and the 1970 Census.

** These data were collected during site visits to the districts. A more detailed explanation of the visits is presented in Appendix A.

2.1 School District Characteristics

The 18 districts (see Table 2.1) vary considerably in population characteristics. The smallest is Montclair, New Jersey, which has 44,043 residents; Houston, Texas, is largest, with a population of 1,231,394. The percentage of minority population in these districts ranges from 7% in St. Paul, Minnesota, to 42% in Stockton, California. The percentage of minority students served by public schools is in every case higher than the percentage of minority population, primarily because a larger proportion of majority students attends private or parochial schools. Thus, the lowest percentage of minority students in the public school systems is 14% (Des Moines, Iowa) while the highest is 69% (Houston).

Only one of the districts in the sample, Montgomery County, Maryland, could be considered prosperous according to its 1970 median family income ($14,090 overall). All other district median family incomes fall between $5,000 and $10,000 overall. Only three of the districts have minority median incomes that approach the overall median; the rest are substantially lower. The range of minority median incomes is from $1,960 in Des Moines to $9,190 in Montgomery County.

Overall median educational levels range from 10.75 years in Buffalo, New York, to 13.83 years in Montgomery County. Minority median educational levels are lowest in Racine, Wisconsin (9.58 years) and highest in Montgomery County (12.94 years). In eight of the districts, the minority median is less than one year below the overall median.

The occupational structure of the minority communities in the districts is also variable. The percentage of the minority workers who were professionals in 1970 ranges from 6% in Racine to 34% in Montgomery County (the district with the highest median income and educational levels). The remaining 16 districts fall between 9% and 17% professional. The percentages for minority white collar workers cover a narrower range, from 21% in Jefferson County, Kentucky, to 35% in Boston, Massachusetts. The percentage of minority workers who are blue collar goes from 36% in Montgomery County to 72% in Racine. Only one district, Montgomery County, has roughly equivalent numbers of minority professionals, white collar workers, and blue collar workers.

Table 2.1

Community Characteristics for Eighteen School Districts

District	1970 Population*	1977 Student Population	Racial Composition*		1970 Median Dollar Income*		1970 Median Years Education*		1970 Minority Occupational Structure*		
			1970 Total Community	1977 School District	Total Community	Minority Community	Total Community	Minority Community	% Professional	% White Collar	% Blue Collar
Boston, MA	641,071	67,973	79% maj. 21% min.	41% maj. 59% min.	$ 5,921	$ 5,016	12.04	11.57	14	35	51
Buffalo, NY	470,528	50,879	78% maj. 22% min.	49% maj. 51% min.	6,568	5,314	10.75	9.91	9	24	66
Dallas, TX	844,403	135,775	66% maj. 34% min.	36% maj. 64% min.	7,984	4,847	12.33	10.18	10	27	63
Dayton, OH	243,601	38,967	69% maj. 31% min.	46% maj. 54% min.	7,236	6,830	11.36	10.80	11	29	60
Des Moines, IA	200,587	36,338	92% maj. 8% min.	86% maj. 14% min.	7,504	1,960	12.40	11.55	13	34	53
Houston, TX	1,231,394	190,132	61% maj. 39% min.	31% maj. 69% min.	8,053	4,952	12.05	9.95	12	29	59
Jefferson Co., KY	695,055	106,752	85% maj. 15% min.	76% maj. 24% min.	8,309	4,870	11.60	10.07	10	21	69
Milwaukee, WI	717,099	100,691	82% maj. 18% min.	53% maj. 47% min.	8,138	6,119	11.91	10.25	9	26	65
Montclair, NJ	44,043	6,420	72% maj. 28% min.	56% maj. 44% min.	9,633	6,500	12.67	11.53	17	26	57
Montgomery Co., MD	522,809	112,105	91% maj. 9% min.	83% maj. 17% min.	14,090	9,190	13.83	12.94	34	31	36
Portland, OR	382,619	55,729	90% maj. 10% min.	80% maj. 20% min.	6,705	5,280	12.30	11.30	15	31	54
Racine, WI	95,162	25,039	85% maj. 15% min.	78% maj. 22% min.	8,982	6,906	11.86	9.58	6	22	72
St. Paul, MN	309,980	34,574	93% maj. 7% min.	85% maj. 15% min.	7,695	5,938	12.20	11.19	14	29	56
San Diego, CA	693,931	91,457	76% maj. 24% min.	60% maj. 40% min.	6,223	2,285	12.50	11.65	16	35	49
Springfield, MA	163,905	27,286	84% maj. 16% min.	58% maj. 42% min.	7,298	5,499	11.96	10.68	11	28	61
Stockton, CA	107,644	23,167	58% maj. 42% min.	43% maj. 57% min.	6,706	5,349	12.05	9.97	13	29	58
Tacoma, WA	154,581	31,336	89% maj. 11% min.	80% maj. 20% min.	7,293	4,660	12.20	11.63	13	34	53
Tulsa, OK	330,409	57,863	85% maj. 15% min.	75% maj. 25% min.	7,872	4,200	12.39	11.04	13	24	63

*Source: 1970 Census of Population, Volume 1: Characteristics of the Population, Parts 6, 17, 19, 22, 23, 25, 32, 34, 37, 38, 39, 45, 51.

2.2 School District Desegregation Factors

2.2.1 Desegregation History

One significant factor which may have an impact upon the success of a magnet school program is the district's desegregation history, namely the scope and source of the desegregation plan, the past difficulty of desegregation and, in general, the attitudinal environment within which magnet programs are developed.

Eleven of the 18 districts in this study are under court order to desegregate (see Table 2.2). Of the remaining seven districts, four are desegregating voluntarily; two are desegregating under formal pressure from their respective State Boards of Education; and one district is the object of HEW administrative action. (These seven districts are classified as "voluntary.") It is important to recognize that court orders vary along a number of dimensions, such as specificity, degree of coverage of the district, control, etc. On the basis, we have characterized the court orders as being "weak" or "strong." Of the eleven court orders, four are "strong."

The source of most (12) districts' desegregation plans exercises a moderate degree of control over the specifications and monitoring of the plans' implementation. All court ordered plans, except Buffalo's, exercise a high or medium amount of control over the plan and its monitoring.

Most of the districts (12) were rated as not having any particular difficulty in implementing their current desegregation plan. Four districts had a moderate amount of difficulty in implementation, and two had a high degree of difficulty. While some court ordered plans were not difficult to implement, all plans implemented with any degree of difficulty were court ordered.

Difficulties were more widespread with regard to transporting students; in fact, only four districts experienced little or no difficulty in this regard. Six of the districts have had moderate transportation difficulties that might affect the magnet schools, and eight have experienced a great deal of difficulty. In general, it is the larger districts that experience greater difficulties.

Twelve of the districts are attempting to desegregate all their schools. The remaining six, five under court order and one under HEW administrative action, have a more limited desegregation scope because their desegregation plans have not, to date, required more. Racial composition goals have

Table 2.2

Description of Current Desegregation Plans for Eighteen Districts

District	Source of Plan	Year of Implementation	Degree of Control Exercised by Source	Difficulty in Implementing Plan	Difficulty in Transporting Students	Desegregation Requirements of District	
						Schools and/or Grades Included	Racial Composition Goals
oston	Court order Strong	1975	High	Difficult	Medium	All schools	Each school in an attendance area should reflect the overall racial composition of the attendance area
uffalo	Court order	1976	Low	Moderately Difficult	Medium	All schools not in the central minority community	No school to have less than 20% minority
allas	Court order	1976	Medium	Not Difficult	High	Grades 4-8 (mandatory) 6 High Schools (voluntary)	Not <25% or >75% minority (grades 4-8)
ayton	Court order	1976	High	Not Difficult	Low	All schools	All schools must reflect district ratio of 48% minority, 52% majority ± 15%
es Moines	HEW administrative action	1977	Medium	Not Difficult	Low	Cited schools	No more than 50% minority in any school
ouston	Court order	1975	Medium	Not Difficult	High	All schools	No school (non-magnet) more than 90% white or 90% black and brown
efferson ounty	Court order Strong	1975	High	Difficult	High	All schools	No more than 12-40% minority (elementary) or 12.5-35% minority (secondary)
ilwaukee	Court order Strong	1976	High	Moderately Difficult	High	All schools	No more than 25-50% minority in any school
ontclair	Formal pressure from state Board of Education	1977	Medium	Not Difficult	Low	All schools	27-57% minority
ontgomery ounty	Voluntary	1975	Medium	Not Difficult	Low	All schools	No more than 50% minority in any school
ortland	Voluntary	1974	Medium	Not Difficult	Medium	All schools	No more than 25% minority (middle and high schools) No more than 50% minority (elementary schools)
acine	Voluntary	1975	Low	Not Difficult	High	All schools	No school will have a minority population above the district average of 17-25%
t. Paul	Formal pressure from state Board of Education	1975	Medium	Not Difficult	Low	All schools	No more than 30-40% minority in any school
an Diego	Court order	1977	Medium	Not Difficult	High	Schools over 50% minority	To reduce minority populations in cited schools
pringfield	Court order	1974	Medium	Not Difficult	Medium	Elementary schools, excluding kindergarten	No more than 50% minority in any school, ideally at or below 30% minority
tockton	Court order Strong	1977	Medium	Moderately Difficult	Medium	All schools	±15% district minority average in each school
acoma	Voluntary	1967	Medium	Not Difficult	Medium	All schools	No school shall exceed 40% minority
ulsa	Court order	1971	Medium	Moderately Difficult	High	De jure segregated schools	Court determined for each school

been specified in all but one site for district schools in general. In most cases, the composition is clearly specified; for example, a district's plan may call for no school to have a minority population in excess of the district average, plus or minus 15 percentage points. All but four of the districts began to implement their current desegregation plans in 1975 or later. (We believe that these districts have more recent plans than most districts in the U.S.)

2.2.2 Desegregation Tactics

Magnet schools are the primary desegregation tool (i.e., magnet only) in eight of the districts, as shown in Table 2.3. The remaining ten districts use magnet schools in conjunction with other techniques (magnet component). Magnet schools play three major roles in the desegregation of school districts. Most of the districts (10) are using them to desegregate certain schools, grade levels or geographic/attendance areas. Four use magnet schools as the major tool for desegregating the entire district, and four see magnet schools simply as an additional tool for assisting in desegregation, useful because they provide voluntary options. Fourteen of the districts use the same racial composition goals for magnets that apply to the district schools in general. Four of the districts have specified their magnet school composition independently, and in these cases the specifications are more stringent than for the district as a whole. At least one district, Buffalo, has different specifications not only for the district schools and the magnet schools but also for ESAA funded and non-ESAA funded magnet schools.

Districts tend to use more than one technique in attempting to implement a desegregation program (see Table 2.3). The most common tool, redrawing of district attendance boundaries, is used in 13 of the districts. Ten of the districts employ pairing and/or clustering, and eight have a voluntary transfer program. Seven have used the closing of selected schools, reportedly for desegregation purposes; it is not, however, always clear whether the primary use of this technique is for economic, political, or desegregation purposes. Two districts have used grade level reorganization and two consolidation of schools as parts of their efforts to desegregate. One district, Tacoma, Washington, which began desegregating in 1967, instituted district-wide optional enrollment as part of its continuing desegregation plan.

Table 2.3

Description of Magnet Schools and Other Desegregation Techniques in Eighteen Districts

District	Role of Magnets in Plan	Racial Composition Goals of Magnets	Additional Techniques Used
Boston*	Provide voluntary option for desegregation and address educational needs	Each magnet school should reflect racial composition of the total district	Redrawing of district boundaries
Buffalo	Provide voluntary option for desegregation	Same as district, but ESAA magnets no more than 50% minority	Majority to minority transfer; redrawing of attendance boundaries
Dallas	To achieve racial balance in six high schools	Capacity of school times ratio of each group in district ± 10%	Redrawing of attendance boundaries; majority to minority transfer; reorganization of grade levels.
Dayton*	Provide another option for desegregation	Same as district	Redrawing of attendance boundaries; pairing and clustering of schools
Des Moines*	To desegregate a particular geographic area	Same as district	Majority to minority transfer; redrawing of attendance boundaries; pairing and clustering of schools; closing of selected schools
Houston	To desegregate the district as a whole	To reflect district distribution of 42% black, 22% brown, 37% white	Majority to minority transfer; redrawing of attendance boundaries
Jefferson County*	To provide an additional option for desegregation	Same as district	Pairing and clustering of schools; closing of selected schools
Milwaukee	To desegregate the district as a whole and certain schools in particular	Same as district	Majority to minority transfer
Montclair*	To desegregate grades K-5	Same as district	Redrawing of attendance boundaries; pairing and clustering of schools; closing of selected schools
Montgomery County*	To desegregate a particular geographic area	Same as district	Redrawing of attendance boundaries; pairing and clustering of schools
Portland	To desegregate a particular geographic area	Same as district	Majority to minority transfer; grade level reorganization; consolidation of certain schools; redrawing of attendance boundaries
Racine	To desegregate a particular geographic area	Same as district	Redrawing of attendance boundaries
Saint Paul*	To desegregate a particular geographic area and provide another option for desegregation	Same as district	Redrawing of attendance boundaries; pairing and clusting of schools; consolidation of schools
San Diego	To desegregate certain schools	Same as district	Majority to minority transfer; pairing and clustering of schools
Springfield*	To desegregate a particular geographic area and meet parent demands for majority	Same as district	Redrawing of attendance boundaries; reorganization of grade levels; closing of selected schools
Stockton*	To desegregate the district as a whole	Same as district	Pairing and clustering of schools; closing of selected schools
Tacoma	To desegregate certain schools	Same as district	Pairing and clustering of schools; closing of selected schools; district-wide optional enrollment
Tulsa*	To desegregate the district as a whole and certain schools in certain areas in particular	50% minority, 50% majority	Majority to minority transfer; redrawing of attendance boundaries; pairing and clustering of schools; closing of selected schools

* Magnet Component plans. In these districts, one or more of the additional techniques used are of major importance.

2.3 Magnet School Program Characteristics

2.3.1 General Characteristics

Magnet schools are found in a substantially greater number at the elementary level than at other levels. The 18 districts have a total of 158 elementary magnets, 28 middle or junior high school magnets, and 41 senior high school magnets (see Table 2.4).* The exceptions to this pattern are Milwaukee, Wisconsin, the only major effort depending primarily on magnet schools for its desegregation, which has half of its 44 magnet schools at the elementary level, and Dallas, Texas, with approximately one-third of its 16 magnet schools at each level. During the site visits, district and school personnel expressed some feelings that desegregation is easier to accomplish at the elementary level. They also mentioned the elementary level as a logical place to begin desegregation. However, personnel in some districts feared that an expansion of magnet programs to other grade levels might not occur, and that children who had adjusted to certain learning styles or specialties early in their school careers might be at a disadvantage later when confronted with a "typical" school.

The distribution of magnet schools by percentage of minority students who attend them is presented in Table 2.5. A review of this table is informative. It will be recalled that from 20 to 50 percent of the students at ESAA funded schools are supposed to be minorities, and that non-ESAA funded schools have widely varying restrictions, usually geared to the desegregation requirements of the school district. However, it is evident from the distribution that, by anyone's criteria, a large number of schools have a high proportion of minority students. Indeed, 27 schools have minority populations of between 81 and 100 percent. This is well beyond the highest average district enrollment for the districts in this study. The distribution indicates, further, that a substantial number (115) of magnet schools, according to the federal guidelines, are minority isolated schools (that is, they have over 50% minority enrollment).

Table 2.6 shows that differences exist in the location of magnet schools by grade level. Secondary schools in our study tend to be located

---

* Our sample may over-represent the number of high school magnets that exists in the nation.

Table 2.4

1977 Magnet Program Characteristics

District	% Minority Students in District	No. of Magnet Schools	Grade Level of Magnet	% Minority Students in Magnets	% of All Students Served
Boston* (ESAA)	59%	24 3 10	Elementary Middle Senior High	31%	32%
Buffalo (ESAA)	51	11	Elementary	16	13
Dallas	64	5 5 6	Elementary Middle Senior High	8	7
Dayton* (ESAA)	54	7	Elementary	9	8
Des Moines*	14	2	Elementary	10	4
Houston	65	27 4 9	Elementary Middle Senior High	5	8
Jefferson County*	24	4 1 2	Elementary Middle Senior High	2	3
Milwaukee (ESAA)	47	22 14 8	Elementary Middle Senior High	38	41
Montclair* (ESAA)	44	4	Elementary	32	31
Montgomery County*	17	14 1	Elementary Middle	24	5
Portland	20	6 3	Elementary Senior High	2	11
Racine	23	3	Elementary	10	2
St. Paul* (ESAA)	17	4	Elementary	10	6
San Diego	40	10 2	Elementary Senior High	10	8
Springfield*	42	5	Elementary	17	11
Stockton* (ESAA)	57	3	Elementary	2	2
Tacoma	20	4	Elementary	12	7
Tulsa*	25	4	Elementary	9	4
	TOTAL	158 28 41	Elementary Middle Senior High		
	GRAND TOTAL	227			

* Magnet Component Plans.

Table 2.5

Percentage of Minority Students Enrolled in Magnet Schools in School Districts in Study

Percentage Minority	Number of Schools	%
0-10	1	.004
11-20	16	.07
21-30	17	.08
31-40	29	.13
41-50	38	.18
51-60	41	.19
61-70	27	.12
71-80	20	.09
81-90	13	.06
91-100	14	.06
Total	216	

Table 2.6

Magnet School Characteristics Totals
for All Districts

1977

SCHOOL CHARACTERISTICS	TOTAL, ALL DISTRICTS	ELEMENTARY	SECONDARY
LOCATION OF SCHOOL:			
Minority Area	67	55	12
Majority Area	40	37	3
Racially Mixed Area	30	24	6
Neutral/Other Area	24	12	12
TOTAL	161	128	33
ATTENDANCE AREA SERVED:			
Citywide	98	74	24
Limited Geographic Area	17	16	1
Neighborhood First, Then Citywide	68	61	7
Neighborhood First, Then Limited Geographic Area	15	15	0
Limited Geographic Area First, Then Citywide	26	17	9
TOTAL	224	183	41
TYPE OF PROGRAM:			
Visual/Performing/Creative Arts	19	16	3
Science/Math/Technology	18	11	7
Careers/Vocations	22	6	16
Language/Humanities	23	21	2
Academic/Honors	22	17	5
Non-Traditional	60	59	1
Traditional	40	38	2
Other	22	17	5
TOTAL	226	185	41
PROGRAM UNIQUENESS:			
Unique Within the District	102	70	32
Not Really Unique, But Different in Some Way(s)	74	67	7
Not Unique At All	13	13	0
TOTAL	189	150	39
TOTAL NUMBER OF MAGNET SCHOOLS	227	186	41

NOTE: School characteristics totals are sometimes less than the total number of magnet schools because of missing data.

either in minority areas or in neutral areas (non-residential areas, such as central business districts). Elementary schools are located primarily in minority areas, followed by location in majority areas. It is not surprising that proportionately more secondary schools than elementary schools are located in neutral areas; since secondary schools have historically drawn from a wider attendance area, they have more often been constructed in readily accessible, neutral areas (e.g., downtown).

It should follow, consequently, that secondary schools serve a wider attendance area served than elementary schools. Indeed, 24 of the 41 secondary schools have a citywide attendance draw and nine more serve a geographic area plus a citywide draw. Nevertheless, a high 40 percent of the elementary schools (74 of 183) also have a citywide attendance area. Still, another 40% serve the neighborhood first and then a wider geographic area. Thus, it can be said that generally, elementary schools tend to enroll pupils from areas near the school or from the city as a whole, while secondary schools tend to enroll students from wider geographic areas (e.g., several school zones or the city at large).

The attendance area would appear to be of importance in the success of magnet schools, particularly on the elementary school level. Traditionally, the "neighborhood school" has been the ideal to which elementary schools were supposed to conform. The concept of "magnet schools" has broadened the possible attendance area for the elementary grades. The consequent key question is whether the magnetism of the school can overcome any resistance promoted by the desire of the parents to have their child attend a neighborhood school.

A variety of program types can be found in magnet schools. Each is discussed in the section on curriculum characteristics which follows (Section 2.3.2). Here we would point out that the most frequently introduced types of magnets at the elementary level (59) are "non-traditional" (e.g., open education and continuous progress programs). These programs are followed by 38 traditional programs such as fundamental, "back-to-basics," or teacher-directed. The most popular programs at the secondary or high school level are those that provide instruction in specific careers or vocations (16 out of 41). There are 14 secondary schools which have curricula which may be college preparatory (science, language, academic). These data support the contention that elementary schools are "methods" oriented while secondary schools tend to be oriented toward substantive areas. However, it is important to note that there is

a great deal of overlap in these areas across grade levels. We might also say a word here about program "uniqueness," although this topic is discussed in greater depth in Section 2.3.3. A unique magnet school offers some form of education that can be found nowhere else in the district. By this criterion, most of the magnet schools (104 of the 189 cases reported) were unique. Only 13 were classified as not unique at all; that is, there was at least one non-magnet school school in the district with a nearly identical program. The remaining 74 magnet schools were similar to at least some other district schools, but different along one or more important dimensions, such as a high degree of parental involvement.

2.3.2 Curriculum Characteristics: Type of Program

As already noted, a wide range of program types characterizes the sites. Only by examining some of these programs in detail does one begin to understand just how "magnetic" a magnet program really can be. During the site visits, team members were very impressed with the many exciting programs and the enthusiasm expressed by teachers, parents and students for the educational experience. In some cases, the academic programs stand out or are supported by excellent staff; in others, facilities, equipment, or special programs or philosophies form the base of the schools' appeal.

In the following paragraphs, we discuss the programs in terms of the categories into which we have placed them. These categories are:

- Visual/Performing/Creative Arts
- Science/Math/Technology
- Careers/Vocations
- Language/Humanties/Multicultural
- Academic/Honors
- Non-Traditional
- Traditional
- Other

- Performing Arts Programs

Performing Arts magnet programs are found in a number of sites. These programs usually offer courses and experiences in artistic areas in addition to regular course work. The areas covered usually include music and dance, and television. There are schools with extensive, professional television equipment and studios within which students regularly prepare programs which are aired, via closed circuit T.V., within the school, or within

the school system. Students also produce videotape shows which are used in the school system for learning or publicity purposes. Other schools, particularly in music and dance, have visiting artists-in-residence programs (e.g., Portland, Oregon), where a nationally known performer, or troupe, will visit the school for a week or two, give performances, give classes, and interact on a personal basis with the students.

- Science, Mathematics, Technology

These schools tend to be academically oriented, stressing the training of students in particular subject matter areas. As such, they are reminiscent of the tradition of schools in certain school districts which for many years have been oriented to the training of talented students in a particular discipline. We found that not all of these schools, including the academic curricula schools, require an entrance examination. This raises the issue of how inappropriately trained students are kept from entering these schools or how, once entered, they are "cooled out" of the program.

- Vocational Schools

Vocationally oriented magnet programs are usually found on the secondary school level. These programs range across occupational categories from legal secretary to business management. They also range from a few select courses that students take (as electives) in addition to their regular course work to schools that are devoted entirely to the subject matter and require dress and behavior codes as a preparation for that occupation. Some schools have developed, in conjunction with their program, internships which allow the student to gain an acquaintance with the occupational field and first-hand exposure to the requirements for that field. Other examples of vocational programs are health related fields, automotive and human services training.

- Language, Humanities, Multicultural

This category of program type includes schools which have curricula which stress the acquisition of languages, the understanding and appreciation of different cultural/ethnic groups, the deliberate mixing of children of many different ethnic/racial groups, and the study of languages.

These programs are mostly found at the elementary school level. As the label indicates, the school purposefully enrolls as wide a variety of racial/ethnic/cultural groups as possible and has as part of its attraction the contact with their backgrounds and their cultures. Such programs usually involve a great deal of parental involvement (e.g., through ethnic nights), the study of the different cultures and life-styles, and contact with and learning to respect different peoples.

Language schools present a varied picture ranging from language immersion schools to bilingual schools to schools which specialize in language training (including such languages as Chinese and Greek). Among the more interesting magnet programs are the immersion schools (French in Montgomery County, Maryland; German in Milwaukee, Wisconsin). In these schools, pupils enter the program and from their first day they are taught only in the language of the school, they hear nothing but that language. All of their books are in the language, and they quickly become conversant in that language. Although all of their regular subjects (mathematics, science, reading, spelling) are taught in the language of the school, students do take the regular standardized achievement tests for their grade level in English.

- Academic, Honors Program

These curricula provide the student with a more rigorous and wider exposure to academic subject matter than might usually be found in non-magnet schools. The emphasis, of course, is upon academic excellence and the preparation of the student for post-secondary training. While both the elementary and secondary levels have academic programs, a higher proportion of secondary schools are of this type. Perceptions gained from the site visits tend to indicate that these schools, like the schools offering curricula in science and mathematics, tend to be havens for middle class students, both black and white, but primarily for white students.

- Non-Traditional Programs

Non-traditional programs encompass a wide variety of curriculum emphases, often associated with physical plant distinctiveness. Programs of this sort included open education, continuous progress, Montessori, and computer-assisted instruction. The curriculum orientations stress the need for the child to follow his/her interests and to proceed through the learning

process at his/her own rate. Physical plant plays an integral part in this educational process through an openness in the classroom or school or other special facilities which enhance the curriculum philosophy. In this regard, it is significant to note that some schools were recently built while there were others which were housed in renovated older buildings in which the redesign provided an outstanding facility for such programs.

- Traditional Schools

Traditional schools can be considered part of the "back-to-basics" movement. In these schools, found primarily on the elementary grade level, the mastery of reading, writing and arithmetic is stressed, together with discipline and orderliness of behavior in the classroom and school environs. Schools show different degrees of adherence to the back-to-basics philosophy. Some schools teach no other subject materials to a child until he or she reaches a certain level of competency in the basic skills. Other schools call for a simple return to the educational philosophy and ways of past years, when the education provided may not have been designed to go beyond basic skills development. It was our perception that traditional programs appealed more to parents of lower socio-economic and educational status who wanted to make sure that their children received a good basic education. We also found instances where traditional programs were viewed by parents as havens for children who were not doing well in school, for "problem" children, or for the educationally handicapped. Parents felt that this approach would be more beneficial than a "regular" classroom or school. In some ways, this can be thought of as "reverse" skimming, a subject which is discussed in Section 2.4.

- Other Programs

We have placed in this "other" category school programs which were not readily definable in our summary categories. Most of these programs were on the preschool or kindergarten level. Early childhood centers and kindergarten magnet programs which stress academic readiness skill training have been developed in sites to attract pupils. In part, this is an attempt to assist in desegregation activities by attracting families to the school. The reasoning is that if parents send their young children to a school, they will get to know the program, keep their child in the school for future grades and,

perhaps, decide to send their other children to the school. Some centers, in addition to the skills training offered, attract parents through an extended program which allows parents to work knowing that their child is having a safe, positive experience.

2.3.3 Non-Curriculum Characteristics

Information obtained during the site visits illustrates some of the techniques employed by school districts in an attempt to ensure the success of their magnet schools. These efforts are primarily in the area of non-curricular activities.

- Strategic Placement of Principals and Staff

It may not be possible to establish a magnet school in an area that would be attractive to the parents of both majority and minority children. Realizing this, many districts have employed the strategic placement of principals and teachers in the magnet schools in order to overcome possible negativism. For example, if a magnet school has been placed in a predominantly majority area, the school district may place a popular and respected minority principal at the head of the school in order to attract minority students and because they feel that minority students will feel more comfortable with that principal to welcome them to new surroundings. Similarly, popular and respected white teachers may be asked to teach at a magnet school established in a minority neighborhood. Often districts are hoping that these teachers will attract the younger siblings of children they have already taught.

Such techniques are truly strategic and rational attempts because they involve more than the "simple" placement of principals and teachers. The choice of principals and of teachers must be coordinated with an assessment of which community would be more likely to send their children to magnet schools. This assessment must include a recognition of the parents' probable support of desegregation and their support for quality education together with a consideration of the distances involved in transporting the child to the magnet school. The placement of a principal or teacher from a school at the far side of a school district, or from a neighborhood with vehement opposition to desegregation, would be less likely to achieve the desired objective of inducing parents to send their child to a new magnet school.

- Dealing with Families

School districts attempt to enhance the possibility for success of magnet schools by dealing with families in at least two separate ways. First, some districts promise that if one child is enrolled in a magnet school, all the children in the family can enroll. This has a positive effect in a number of ways. It motivates parents because in this manner all of their children can get a "quality" education. It reduces the problem of multiple transportation routes if children are going to different schools. And, it gives parents an element of control over the school their children attend. There is always the possibility that, in a desegregating school district, one or more of a family's children may be assigned to schools the parents know little about or do not like.

Some magnet schools require the involvement of parents through an educational contract arrangement, which provides the parents not only with a responsibility, but also with a definite involvement in the education of their child. Other schools involve parents through a series of extra-curricular activities. Multicultural schools, for instance, may have regular "ethnic nights," where shows are given and ethnic dinners prepared by the parents.

- Physical Plant

Buildings which house magnet schools range from the ultra new, to renovated interiors of older buildings, to very old, almost dilapidated structures. There is little doubt that the newer physical plants, with newer equipment and more extensive facilities (like a swimming pool), are added inducements for a parent to enroll a child. However, it is our perception that the physical plant per se does not create that critical element of magnetism. Rather, the curriculum, atmosphere and other factors are of greater import.

- Program Uniqueness

As mentioned earlier, over half of the schools were rated as being unique within the district; only 13 out of 189 schools were rated as being in no way unique. That magnet schools need to be unique is disputed by administrators in some districts. They believe that increased educational

excellence is sufficient reason for uniqueness. Thus, if a district's schools have a traditional curriculum orientation, a magnet school could still be magnetic by establishing a traditional school of greater excellence. Administrators argue that two or more of the same curricular type schools could exist in the same district since, quite often, the demand for the program could require a number of schools. An associated objection to a requirement that schools must be unique is the wish of district officials not to have to establish a unique program just because it is unique. They would rather establish a program which meets their needs and fits within their resources. However, it should be noted that the lack of uniqueness in the magnet schools of a district leads to some resentment by non-magnet school principals and staff. Their feeling is that a magnet school with similar curriculum orientation is a statement that their school is not doing the educational job it should be doing.

2.4 Variables of Intrinsic Interest

During the site visits, information was collected which did not or (because of lack of sufficient cases) could not correlate statistically with our measures of magnet effectiveness (see Chapters Three and Four). That is, these factors did not help us to statistically explain the effectiveness of magnet school programs in district desegregation outcomes or the success of magnet schools in reaching their racial composition and enrollment goals. This section presents a discussion of those characteristics of magnet schools and their contexts that, common sense suggests, may help us to understand some of the impacts of magnet schools upon the community. The reader is cautioned that, unless specifically indicated, the discussions will not pertain to the districts in general, but will be descriptive of only a few (or even one or two) of them.

- Reactions of Minority Communities

It was noted in some districts that opposition to desegregation or the techniques employed to achieve it is not usually heard from the minority communities because the opposition is loosely organized and because the minority population lacks sufficient political cohesiveness and leadership to make their opinions known and respected. In Buffalo, as in most other communities, there exists a very strong feeling in favor of neighborhood schools in both the majority and minority communities. Fully 45% of the minority student population still attended racially isolated schools at the time of our data collection since Buffalo's court order had not been extended to this population. The feeling among spokespersons representing the minority community was that the parents of a large number of these children would be thoroughly opposed to their children attending schools, even magnet schools, outside of their neighborhoods. If the district were to implement more magnet schools, it would be unlikely that they would be located in this inner-city minority community since past experience has shown that it is extremely difficult to attract sufficient numbers of white students to these areas. At times, minority community representatives stated that even though they are not particularly happy about magnet schools, they refrain from publicly denouncing them because they recognize the crying need for quality education. They feel that magnet schools do not, at present, go nearly far enough in

satisfying that need or the need for desegregation. In fact, several individuals were quite certain that the magnets are detracting from the quality of education in the non-magnet schools.

Even though the minority community may agree that the quality of education at a neighborhood magnet school is much higher now than the education provided in previous years, there is resentment because the quality was so low when the school was de facto segregated. And, often, the minority community is irate because now that there is quality education, not all of their children will be allowed to attend the schools since a particular racial composition is desired. Thus, some children in the community are required to go out of the neighborhood to non-magnet schools.

- Parent Participation

As noted before, there are magnet programs that are not truly unique but that differ from their non-magnet counterparts along some important dimension. Among these programs, this dimension is often parental involvement, (75% of the cases), either in the planning stage, in operation, or both. Even though the site visits did not include extensive interviewing of parents, team members were impressed with evidence of parental involvement in many schools: It was not uncommon, for instance, for team members to note that parental participation added much to the ambiance of the school. Parents could be seen tutoring children, cooking (in the classroom!), helping in the library, observing their child (required at regular intervals by some schools), teaching and performing a myriad of other tasks.

Other methods used to involve parents are:

--Creating a Parent Involvement Association, complete with its own office, in which parents form committees to actually run certain areas of school functioning (such as library, tutoring, transportation, communication, fund raising, policy); and

--Involving parents in the creation of a school, including establishing its location, designing the plant, planning for community involvement and the provision of services (e.g., health), and choosing the mode of instruction.

Several parents interviewed were very active in their schools, not only in the traditional sense of helping out with parties and providing transportation for field trips, but also in more uncommon ways. Some parents

have been instrumental in problem solving at the district level when things have not been satisfactory to parents at the school level. There is also a kind of parental involvement that does not entail the parent doing something for the school but vice versa, which makes the parents feel welcome and the schools become part of community life. Examples of this are:

--A Teacher Corps project located in the school which, as part of its operation, provides $13,000 for after school classes for adults and children;

--Providing parent lounges where parents can meet, read, watch television, or whatever.

In at least one district, magnet parents are trained and employed as recruiters to do door-to-door counseling of prospective magnet families.

- Evidence of Volunteerism

A large number of people have fought against busing for their children while maintaining that they are not opposed to desegregation per se. Our site visits have found that some of these people, given the opportunity to have some control over their children's schooling, and knowing that what is at the "end of the bus ride" is likely to be the finest educational alternative publicly available to them, are willing, even eager, to put their children on a bus. In Buffalo, for example, some of the individuals in the community who had voiced the most organized opposition to mandatory busing were in the vanguard of those who entered the magnet school lottery. A newspaper article, based on an interview with one of these people, quoted her as saying that finally she felt her tax dollar was buying something worthwhile and that, if her child's name was not drawn in the lottery, she'd take the school district offices apart "brick by brick."

- Reactions of Non-Magnet Principals

In many ways magnet schools are a mixed blessing for school districts. It is understandable that the principals (and staff) of non-magnet schools would resent the extra funds and attention given to magnet schools. It is also understandable that they would feel slighted when the magnet schools are touted as being "better" than other schools. After all, these principals maintain, they have been doing their best to provide good education for years;

now, suddenly, their best is not good enough. The third reaction frequently found is a result of the declining enrollment situation faced by most districts. Principals do not want their schools closed; they have years invested in them, and new principalships do not abound. The loss of even a few students to magnets in a school with declining enrollment could put its existence in jeopardy. Principals know when this situation exists and are not likely to inform their students or students' parents about magnet alternatives.

Some principals, on the other hand, are not so worried about their schools. They still do not care to hear that the magnets are "better," but prefer to think of them as different. Some of these are very willing to inform students and parents individually about the options available to them when they feel it is in the student's best interest. Still others recognize a general need for educational alternatives. More feel that the extras provided to magnet schools are necessary either to operate certain kinds of alternatives or to serve the particular populations that magnet schools serve or both. For example, in districts where only a portion of the schools are affected by desegregation, extra funds are often necessary to implement human relations programs which assist teachers to deal with ethnically and socioeconomically diverse populations. Many principals understand this and realize that they do not require such extra funding and effort to work with their more homogenous student bodies.

There are districts in which a great deal of resentment exists toward the magnet program. It is important to note, however, that the resentment is not due solely to the magnet program, but rather it is confounded by the weight of desegregation related problems in general, and the lack of support for "quality" education for the entire district.

- Skimming

It has been feared that magnet schools might hasten the deterioration of non-magnet schools by "skimming off" their best students and faculty. While it is to some extent true that parents who place the highest value on their children's education are more likely to take advantage of magnet options, it is not always true that their children are the "cream of the crop" academically or socially. In fact, we found surprisingly often that magnet schools were attracting children who were <u>not</u> succeeding in regular schools. These

children may have behavior problems, be academically disadvantaged or unmotivated, or have other special needs. Others are children who might perform better in a more structured (or unstructured) school environment than that provided by the district's non-magnet schools. For the parents of some children, magnets are viewed as a "last hope" for their children.

The possibility of skimming is enhanced by one factor which is seldom considered. Because of the difficulty of implementing some desegregation programs, we tend to overlook that large reservoir of parents and students, both majority and minority, who desire a desegregated, multicultural, multiethnic educational setting. Our site visits found such a base in every district. We do not know just who makes up this group of persons, but we assume that while they represent all socio-economic levels, a proportionately higher number may be from the better educated and higher income groups. If this is the case, there is a natural base for some potential skimming of particular kinds of students and families. This subject is in need of more systematic study.

Two other factors must be noted in regard to fear of skimming. First, as pertains to better, more affluent minority families, there is a lingering suspicion that education provided for minorities will never be as high in quality as that provided for a primarily white student body. Many of these families, given the opportunity, elect to transport their children to private schools or to magnet schools which are seen as serving more majority and more affluent students. Thus, inner-city magnet schools are sometimes faced with the problem not only of racial balance, but socio-economic balance as well.

Second, in the area of staff skimming, it is important to note that, in many districts, teachers are where they are because they want to be there. Not all the "best" teachers will choose to teach in an open education situation in a magnet school, for example, simply because they prefer the more traditional approach of the regular district schools.

- Diffusion of Innovation

There does not seem to be as much diffusion of innovations of magnet schools within districts as might be expected. The reasons for this are, first, as mentioned earlier, that there often is resentment in non-magnet schools about the so-called superiority of the magnet schools. Most non-magnet staff take pride in what they have accomplished and are not very willing to accept innovations since that would be an admission that they are not doing their best. They prefer to think of the innovations as "different,"

not "better." Magnet school staff are acutely aware of their colleagues' feelings on this subject and do not, therefore, engage in proselytizing. The second reason is that magnet school staff feel they simply do not have the time to promote innovations in non-magnet schools.

There has been, however, a great deal of diffusion among districts. When districts begin to plan their magnet programs, they frequently send representatives to other districts or invite magnet school "experts" in to learn about what innovations they might apply in their own districts. In this way, districts learn of pitfalls to avoid and of innovations that have worked well in circumstances similar to their own. (However, such information ought to be much more easily available to districts that need it.)

- Planning and Implementation

Once a district has decided to establish a magnet program, it is faced with the formidable tasks of planning for it, selling, and, finally, running it.

Planning involves funding and other resources, time, and program development. Front end costs for magnet schools may be phenomenally high, especially when a new facility is planned. If a district is to foot the bill without help from institutions or federal grants, intensive effort and political astuteness are often required to develop funding. Special tax levies, for example, may require state approval. Even then, a bond issue requires a substantial portion of the local vote. Especially in districts where tax rates are already high and/or desegregation is an unpopular cause, careful maneuvering is required for success. Fortunately, once front-end funding is established, magnet schools do not seem to require significantly higher budgets to operate than non-magnet schools.

The planning time for magnet schools may be crucial. Some districts estimate that at least nine to ten months are required for successful planning. In the push for desegregation, however, a district may feel that such time is not available and, therefore, not invest fully in the development of their magnet schools. They may simply label some schools "magnets" and make little or no effort to install special programs. It is our impression that these schools are not likely to be successful. On the other hand, schools that were run as pilot programs or that previously implemented special programs fare better. Not only are these schools highly thought of in general, they also exhibit an ease of implementation not usually found in other schools.

Needs assessments are also important in determining how schools are viewed by those they are intended to serve. Simply providing even the most innovative programs and modern facilities and/or equipment will not produce a popular magnet school if there is no demand for it where it is located. It is necessary to determine what the potential users of a school with voluntary enrollment want in a school. Different ways of assessing community needs have been employed in a number of the school districts visited. In Buffalo, for example, district administration held a series of community meetings to determine the direction their plans should take even before magnet schools had been formally decided on as the technique of choice. In these community meetings, which were held all over the city during a three month period, district staff, teaching staff, and State Board of Education staff described various desegregation techniques that might be employed to satisfy the court. Feedback from the community led the district to expand their magnet program, which at the time consisted of only two schools, to nine more, planned by a team of administrators, teachers, university and college representatives, community persons, and parents on the basis of appeal and educational value. The effect on staff is apparent, too, when planning and organization pay off in smoother functioning and increased satisfaction. This, in turn, bolsters the image of a school even more.

Giving magnet schools adequate publicity is necessary to insure sufficient enrollment of students of all ethnic groups. One notable effort to maintain continuing publicity exists in Tacoma. SUMCO, the Summit Counseling Program, is a very active but low key recruiting program. It involves not only professional counselors, but also trained parents, students, staff, and other lay people in door-to-door canvassing and special meetings with alienated students and families to explain the alternatives provided by the magnet schools. Tacoma credits this program with a great deal of its success in desegregation. In Buffalo, magnet schools were advertised not only via radio and television, posters, circulars, and newspapers, but even through automated slide shows in shopping malls.

Program development is important if a magnet school is to become truly magnetic. Simply attaching a magnet label to a school may make it attractive initially, but will not suffice to hold the desired population. In some districts it was said that it was too soon to tell (after only a few months of operation) whether or not parents would remain satisfied with the quality of the magnet offerings. Elsewhere, it was noted that, even with good planning, it requires three to four years for a magnet program to develop

fully; even with the best planning, not everything works out as anticipated. Staff selection is also an important factor in program development. A good program administered improperly is equivalent to a bad program. The adequacy of training of faculty in the magnet program may also be a vital factor in its ultimate success, as is settling on a program that is feasible to implement, given the resources available and the capabilities of the staff.

CHAPTER THREE

SCHOOL DISTRICT DESEGREGATION AND MAGNET PROGRAM EFFECTIVENESS

3.0 Introduction

In the previous chapter we described the magnet schools in our sample, as well as the district contexts within which the magnet schools operate. We have used the characteristics of the magnet schools and the districts in an attempt to understand magnet school effectiveness and the differences between districts in desegregation effectiveness. From our analyses, the following major conclusions have been reached:

- Effectiveness of district desegregation was related more to contextual and demographic features of the district than to magnet school factors.
- Magnet schools were effective in a more limited capacity (i.e., used to desegregate particular schools or a particular geographic area) than in a wider coverage capacity (i.e., district-wide).
- Magnet schools were more effective when used as one component of a comprehensive desegregation plan than when used as the major technique to achieve district desegregation.
- Effective magnet school programs were found, but they were not necessarily related to district desegregation effectiveness; one reason for this phenomenon was that many magnet programs served a small proportion of the district's pupil population.

We begin our analyses by developing a measure of district-wide desegregation effectiveness (Section 3.1). We apply this measure to our 18 districts, with particular attention to changes in desegregation over time. Section 3.2 identifies correlates of district desegregation effectiveness; that is, those demographic and other features of the districts that tend to be associated with successful desegregation efforts. Section 3.3 takes up the task of measuring magnet program effectiveness; and Section 3.4, in turn, explores the correlates of magnet program effectiveness. Finally, in Section 3.5, we look at the relationship between magnet school program effectiveness and the effectiveness of a district's desegregation efforts.*

---

* Appendix A contains a detailed explanation of our analytic approach.

3.1 District Desegregation

Desegregation at the district level can be measured in several ways.* Perhaps the most widely used method is to measure the racial composition of each school in a district and the degree to which, on the average, each school deviates from the racial composition of the school district as a whole. District progress in alleviating segregation is then measured by the change from one year to the next in that deviation score. The most commonly used measure of this type is the Index of Dissimilarity (D).**

Originally created by Taeuber and Taeuber (1965), this measure is rather strict, because it takes as its definition of equity the exact proportion of minorities in a social unit (e.g., black) as is the proportion in the population. However, it has in common with guidelines often used by courts and governmental agencies the fact that it starts with the racial composition of the school district as the standard by which desegregation is judged, though unlike the decisions of courts and governmental bodies, no loosening of that standard is "allowed." For this analysis, the index is extremely useful in that it provides a measure of desegregation that is comparable across districts. The index (D) score ranges from 0 to 1.00, with 0 being perfect racial balance and 1.00 being perfect imbalance. The score represents the proportion of minorities who would have to be reassigned (if no whites were reassigned) in order to have the same proportion of minorities in each school as in the whole school district. Thus, D is essentially a measure of "equity" in a school system; that is, the distribution of minority students is equal across all schools in the district. (It must be noted that this index varies from the ESAA index which is the official measure of the desegregation policy espoused in the law and the regulations. The ESAA index measures the percent of minority students in schools which are composed of over 50 percent minority students, i.e., the percent of minority students in minority isolated schools.)

---

*For a more complete exposition of various methods, see Baltzell, C. and E. Royster, "Study of the Emergency School Aid Act Magnet School Program: Analysis Plan," June 15, 1978.

**The index of dissimilarity is a measure developed by Karl Taeuber and described in Karl Taeuber and Alma Taeuber, Negroes in Cities (Chicago: Atheneum, 1972, p. 236.) The formula for the measure is:

$$D = \tfrac{1}{2}\Sigma \left\{\frac{Mi}{M} - \frac{Wi}{W}\right\} \qquad \text{or} \qquad D = \frac{\tfrac{1}{2}\Sigma Ti \mid Pi - p\mid}{Tp\ (1-p)}$$

where Mi is the number of minorities in the ith school, Wi the number of whites in the ith school; Ti is the total enrollment in the ith school, Pi is the percent minority in the ith school.

Although D is a good measure of desegregation effort from the perspective of equity alone, it does not measure how much interracial contact there is in a district. That is to say, we cannot tell from D the degree to which minorities are in contact with whites. For example, a school district with five schools and an enrollment of 500 minority and five white students, could distribute the latter so that there was one white child in each school. This would give the district a score on D of zero or perfect racial balance. Another school district could also have five schools, but have a racial composition of 500 minority and 500 white students, with each school having 100 students of each group. This school district would also receive a D of zero. Clearly, however, there is much greater interracial contact for minorities in the second district than in the first.

Interracial contact can be determined with Coleman's S_{bw}, which is a measure of the proportion white in the average minority child's school. The measure is calculated as follows:

$$S_{mw}^{*} = \frac{\sum_{k} n_{km} \cdot p_{kw}}{\sum_{k} n_{km}}$$

where n_{km} is the number of minorities in a given school and P_{kw} is the proportion white in a given school. This index of interracial contact reflects both the distribution of the races across schools and the degree to which minority children have contact with whites. It is a measure of both equity and interracial contact. (In this regard, S_{mw} corresponds closely to the ESAA index.)

The lowest score a school district can obtain on S_{mw} is 0 (minority children have no contact with whites). The upper limit, however, is determined by the proportion white in the district. Thus, if a school district is 30% white, a score of .30 will indicate perfect contact for that district. S_{mw} has been used in recent studies of white flight, which is often associated with a district's desegregation history. While this study is not an investigation of white flight, S_{mw} is nevertheless useful to us because a primary argument advanced by proponents of magnet schools as desegregation devices is that magnets help to retain white students in the district. That is, it is argued that magnets cause less white flight than do mandatory techniques, or

---

*Since this study deals with all minorities, rather than just blacks, we have changed the notation from S_{bw} to S_{mw}.

even prevent it. Thus, for a given amount of desegregation, magnets should produce a greater net benefit in terms of simple interracial contact.

We have chosen to make our final assessment of district desegregation using a combined index that incorporates both D and S_{mw}. Our decision to use $\frac{S_{mw}}{D}$ is based upon the measurement characteristics and upon the conceptual relevance of each of the separate indices. D, while comparable across districts, sets a measure of equity (proportionate representation of majorities and minorities in each school) which may be considered to be too restrictive and not reflective of reality. S_{mw}, on the other hand, cannot be compared across districts because its upper limit varies by the percent majority in the district. Yet, S_{mw} provides the valuable information on interracial contact in the district's schools. This index ($\frac{S_{mw}}{D}$) combines both important items of information such that we can assess the amount of change in interracial contact for a given change in the equitable distribution of minority students.

In addition, the use of this index (through S_{mw}) provides information on one of the major arguments about the use of magnet schools. This argument is that magnet schools may have a positive influence through reducing the amount of "white flight" from the school district and, consequently, may in the long run result in greater contact between majority and minority students. $\frac{S_{mw}}{D}$, therefore, will provide an implicit test of this hypothesis, namely that an increase in S_{mw} for a given reduction in D will reflect less white flight.

In order to assess the effect that the introduction of magnet schools has upon school district desegregation, we measure the difference (Δ) between a district's score on $\frac{S_{mw}}{D}$ in the year prior to the introduction of magnet schools and $\frac{S_{mw}}{D}$ for 1977. A district which has been successful in district desegregation since the implementation of magnet schools, in terms of increased equity and interracial contact, should show an increasingly greater score; that is, there will be increases in S_{mw} and reductions in D resulting in a larger score for $\frac{S_{mw}}{D}$. An interpretation of this score would be that a district which has been successful in achieving greater racial equity across its schools (as measured by decreases over time in D) and has been successful in minimizing white flight (as measured by increases over time in S_{mw}) will show increases in the scores on the ratio $\frac{S_{mw}}{D}$ since the implementation of magnet schools.

Table 3.1 shows district scores on the index of dissimilarity (D), the index of interracial contact (S_{mw}), and the combined index.* As can be seen from the first column, D scores range from .066 to .814, with a mean of .301. It will be recalled that a low score on D means a district is relatively desegregated; a high score, the opposite. Thus, a score of .814 means that 81.4% of the minorities in the school district would have to be reassigned from their present schools to "majority" schools in order to have the same proportion minority in each school as in the whole school district. Judging by mean D scores, magnet component districts are more desegregated than magnet only districts.

The second column of Table 3.1 shows the 1977 levels of interracial contact (S_{mw}) in the 18 districts. (A high score on S_{mw} means that a minority child has extensive contact with whites; a low score, the opposite.) S_{mw} scores range from .791 to .165. The mean is a rather high .530; that is, the average minority child is in a school which is 53% white. The districts which are ranked lowest in interracial contact are so mainly as a function of severe racial imbalance. That is, even if these school districts had perfect racial balance, their scores on interracial contact would remain low (e.g., a score of .36 for Dallas or .35 for Houston.) We also see that interracial contact is higher in magnet component than in magnet only districts.

In the third column of Table 3.1 are the results for our combined index, $\frac{S_{mw}}{D}$. It is the change over time in a district's score on this index that constitutes our index of desegregation effectiveness ($\Delta \frac{S_{mw}}{D}$). Those scores appear in Table 3.2, where districts are ranked in descending numerical order on their 1977 score for $\Delta \frac{S_{mw}}{D}$. (Note that the pre-magnet year varies from district to district.) Again we see that magnet component districts achieve more desegregation than do magnet only districts. The districts have been separated into three groups--high, medium, and low--on the basis of their $\Delta \frac{S_{mw}}{D}$ scores. The relative importance of magnet school programs in each of these districts is discussed in Section 3.5.

Tables 3.3 and 3.4 display additional information on changes over time in desegregation by district. An examination of these tables permits us to assess the data to answer a basic question posed of magnet schools. That question is: Do magnet schools increase the segregation in the non-magnet

---

*Tables B-5 to B-7, Appendix B, contain detailed information on the districts' scores on these measures.

Table 3.1

1977 District Scores on Three Indices of Desegregation

	D	S_{mw}	$\frac{S_{mw}}{D}$
Jefferson Co.*	.098	.729	7.44
Racine	.100	.741	7.41
Montclair*	.066	.551	8.35
St. Paul*	.120	.780	6.50
Des Moines*	.116	.791	6.82
Portland	.188	.706	3.76
Dayton*	.262	.419	1.60
Stockton*	.246	.414	1.68
Springfield*	.258	.509	1.97
Milwaukee	.448	.400	0.89
Buffalo	.468	.381	0.81
Boston*	.316	.349	1.10
Montgomery Co.*	.120	.769	6.41
Dallas	.692	.228	0.33
Houston	.814	.165	0.20
San Diego	.518	.391	0.75
Tulsa*	.464	.462	1.00
Tacoma	.124	.746	6.02
$\bar{x}$	.301	.530	3.50
$\bar{x}$ Magnet Component Districts	.207	.577	4.29
$\bar{x}$ Magnet Only Districts	.419	.470	2.52

* Magnet Component Plan

Table 3.2

District Scores on $\Delta \frac{S_{mw}}{D}$

		Year Magnet Was Introduced
Jefferson Co.*	7.24	1976
Racine	5.16	1975
Montclair*	3.25	1977
St. Paul*	3.16	1973
Des Moines*	2.88	1974
Portland	1.38	1974
Dayton*	1.31	1975
Stockton*	1.05	1977
Springfield*	.94	1976
Milwaukee	.55	1976
Buffalo	.41	1976
Boston*	.39	1975
Montgomery Co.*	.14	1976
Dallas	.07	1976
Houston	- .01	1975
San Diego	- .03	1968
Tulsa*	- .18	1973
Tacoma	-1.62	1968

* Magnet Component Plan

Table 3.3

Desegregation Effort in Magnet and Non-Magnet Schools as Measured by the Index of Dissimilarity (D)

		1	2	3	4	5	6	7	8	9	10	11	12
		1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1977-1972 ΔD	NM Pre-Post Magnets ΔD
Montclair*	M	.070											
	NM	.054	.108	.174	.198	.162	.148	.320	.432	.370	.426	-.094	-.054
Jefferson Co.*	M	.178	.268										
	NM	.096	.140	.152	.710	.750	.754	.756	.746	.790	.748	-.658	-.056
Racine	M	.030	.060	.056									
	NM	.104	.104	.090	.278	.304	.300	.320				-.196	-.174
Des Moines*	M	.030	.066	.146	.222								
	NM	.106	.162	.192	.260	.318	.330	.302	.302	.284	.326	-.224	-.212
Montgomery Co.*	M	.196	.258										
	NM	.102	.096	.138	.128	.236	.218	.216				-.116	-.036
St. Paul*	M	.110	.094	.194	.250	.264							
	NM	.114	.126	.160	.210	.280	.294	.282	.262			-.180	-.180
Tacoma	M	.070	.096	.128	.114	.114	.102	.178	.204	.302	.034		
	NM	.110	.116	.104	.104	.104	.084	.084	.082	.086	.092	+.026	.018
Portland	M	.222	.252	.206	.124								
	NM	.164	.174	.190	.244	.290	.306	.410	.396	.418	.398	-.142	-.234
Stockton*	M	.026											
	NM	.246	.442	.598	.544	.556	.562	.578	.574	.576	.576	-.316	-.196
Springfield*	M	.412	.334										
	NM	.220	.214	.274	.264	.436	.316	.398				-.096	-.054
Dayton*	M	.316	.070	.578									
	NM	.264	.250	.712	.756	.786	.816	.836				-.552	-.492

*Magnet Component Plan M = Magnet
NM = Non-Magnet

Table 3.3 (cont.)

		1	2	3	4	5	6	7	8	9	10	11	12
		1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1977-1972 ΔD	NM Pre-Post Magnets ΔD
Boston*	M	.208	.216	.228									
	NM	.364	.254	.322	.470	.704	.696	.712				-.332	-.106
Milwaukee	M	.338	.250										
	NM	.498	.618	.720	.748	.738	.758			.766		-.250	-.222
Tulsa*	M	.280	.314	.384	.010	.056							
	NM	.460	.454	.438	.510	.416	.428	.588	.622	.598	.614	+.032	.032
Buffalo	M	.481	.133										
	NM	.462	.652	.678	.688	.694	.686	.700	.696	.698		-.224	-.216
San Diego	M	.440	.362	.342	.358	.292	.262	.146	.190	.252	.180		
	NM	.520	.520	.496	.476	.490	.492	.490	.502	.522	.516	+.029	.004
Dallas	M	.675	.935										
	NM	.682	.698	.768	.778	.780	.782		.864		.846	-.100	-.086
Houston	M	.522	.718	.688									
	NM	.834	.812	.802	.796	.792	.788	.784	.778	.830	.830	+.046	.038

*Magnet Component Plan M = Magnet
NM = Non-Magnet

Data are presented by magnet and non-magnet school categories. However, because of the low N involved, no comparisons should be drawn between magnet and non-magnet schools. These data are meant to help the reader to get a sense of resegregation in each type of school.

Table 3.4

Interracial Contact in Magnet and Non-Magnet Schools as Measured by Smw

		1	2	3	4	5	6	7	8	9	10	11	12
		1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1977-1972 ΔSmw	NM Pre-Post Magnets ΔSmw
Des Moines*	M	.670	.482	.449	.369								
	NM	.805	.769	.754	.694	.637	.629	.658	.660	.678	.636	.176	.168
St. Paul*	M	.692	.678	.594	.606	.595	.822	.891					
	NM	.773	.777	.766	.720	.664	.652	.663	.683			.121	.090
Montgomery Co.*	M	.589	.551	.853	.868								
	NM	.787	.797	.785	.802	.645	.667	.669				.120	.142
Tacoma	M	.590	.577	.556	.582	.598	.624	.543	.379	.291	.297		
	NM	.764	.765	.779	.793	.799	.818	.820	.829	.837	.838	-.054	-.074
Racine	M	.791	.762	.775									
	NM	.735	.749	.758	.625	.606	.611	.597				.124	.011
Jefferson Co.*	M	.690	.628										
	NM	.730	.707	.716	.261	.226	.223	.219	.226	.178	.202	.507	.014
Portland	M	.547	.523	.488	.603	.755	.745	.772	.743	.786			
	NM	.728	.735	.731	.691	.665	.650	.553	.568	.549	.567	.078	.161
Montclair*	M	.537											
	NM	.557	.551	.530	.530	.549	.555	.483	.411	.445	.434	.002	.006
Springfield*	M	.330	.300										
	NM	.545	.559	.517	.538	.449	.573	.493				-.028	.028
Tulsa*	M	.380	.362	.355	.487	.486							
	NM	.472	.482	.496	.427	.510	.505	.368	.350	.368	.362	-.033	-.033
Dayton*	M	.349	.326	.157									
	NM	.422	.439	.215	.196	.190	.171	.146				.251	.226

*Magnet Component Plan ... Magnet

Table 3.4 (cont.)

		1	2	3	4	5	6	7	8	9	10	11	12
		1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1977-1972 ΔSmw	NM Pre-Post Magnets ΔSmw
Stockton*	M	.544											
	NM	.412	.370	.314	.359	.357	.354	.344	.344	.347	.345	.058	.042
Milwaukee	M	.435	.541										
	NM	.378	.327	.243	.227	.230	.215			.213		.163	.135
San Diego	M	.377	.491	.496	.494	.505	.509	.723	.698	.648	.712		
	NM	.393	.401	.425	.443	.436	.437	.439	.434	.424	.434	-.044	-.041
Buffalo	M	.310	.548										
	NM	.394	.285	.269	.259	.255	.270	.266	.273	.270		.124	.125
Boston*	M	.397	.482	.505									
	NM	.327	.412	.379	.333	.237	.245	.237				.082	-.006
Dallas	M	.147	.094										
	NM	.235	.236	.200	.207	.211	.216		.139		.142	.019	.035
Houston	M	.297	.191	.217									
	NM	.161	.168	.168	.171	.173	.177	.183	.185	.157	.159	-.016	-.010

*Magnet Component Plan M = Magnet
NM = Non-Magnet

Data are presented by Magnet and Non-Magnet school categories. However, because of the low N involved, no comparisons should be drawn between Magnet and Non-Magnet schools. These data are meant to help the reader to get a sense of resegregation in each type of school.

schools? It is reasonable to expect that, without other actions, the enrollment of pupils in magnet schools could lead to an increased segregation of minorities and majorities in the non-magnet schools. That is, majority students could be drawn from desegregated schools leaving those schools with a higher proportion minority students. An examination of these tables indicates that in general non-magnet schools in the districts studied are not increasing in segregation. When the Index of Dissimilarity (D) is used (Table 3.3), only four districts--Tacoma, Tulsa, San Diego and Houston--show an increase in the index when measured before the implementation of magnets compared to 1977. For the measurement of S_{mw}, interracial contact (Table 3.4), only these four districts plus Boston show a decrease in interracial contact. Thus, while the length of the experience with magnets is limited in these 18 districts, the available evidence shows that in general magnet schools do not have the effect of increasing segregation in the non-magnet schools.* It should be noted, however, that this lack of an effect may be due in part to the small proportion of students enrolled in magnet schools in most of the districts.

*For data on the presence or absence of resegregation using the measure Smw/D, see Table B-8 of Appendix B.

3.2 Correlates of District Desegregation

Using the statistical and other data collected on the 18 districts and their magnet schools, we attempted to measure the relative contribution to district desegregation made by the districts' magnet schools. The objective was not to investigate desegregation qua desegregation, but rather to investigate those factors which are related to desegregation effectiveness when districts are employing magnet schools as a part of their strategy. Accordingly, the measure of desegregation effectiveness ($\Delta \frac{Smw}{D}$) was subjected to a correlational analysis utilizing variables which reflected the context and desegregation background of the district, magnet school structures and processes, and community factors.

As a result of our analysis, we found that magnet school variables (e.g., whether needs assessments were conducted, what groups were involved in planning) did not show a meaningful relationship to district desegregation. The variables that did correlate with desegregation effectiveness fell into two groups: those representing the conditions under which desegregation is occurring in a district (contextual variables) and those representing attitudinal conditions under which the desegregation plan is operating. In the first group are variables such as the type of district desegregation plan and comprehensiveness of the the plan. In the second group are variables which attempt to capture the community environment in which desegregation is occurring, including items such as the support of various constituencies for desegregation. Each of these groups of variables is discussed, in turn, below.*

3.2.1 Contextual Variables

In this group of variables are the items which describe the conditions under which desegregation is occurring in a district. The items found to be major correlates of desegregation effectiveness were:

- Type of desegregation plan (i.e., whether the specified plan is a result of a voluntary** decision to desegregate or the result of a court order);
- Comprehensiveness of the desegregation plan (i.e., whether the entire district or some subset of the district is specified by the plan to have a particular racial composition);

---

*Table B-3 in Appendix B displays the data for the following discussion.

**The reader is reminded that "voluntary" in the study means voluntary plans (4 districts) and plans required by an agency other than a court (3 districts). Please see p. 19.

- Percent minority students in the district (the Fall 1977 figure);
- Role of magnet schools in the desegregation plan (whether magnets are the major technique being used to desegregate the district or whether they are one of many techniques);
- Percent of minority students participating in the magnet program (a proxy variable for the scope of the magnet program).

The type of desegregation plan was the variable most highly correlated with the desegregation index. The correlation coefficient indicates that districts which desegregate voluntarily achieve more desegregation. This finding is not surprising given that districts which desegregate as a result of a state or federal court order have usually experienced more segregation and more difficulty in implementing their desegregation plan. This is further confirmed by a second correlation: when the percent of minority students is high, less desegregation is achieved (i.e., the district achieves a lower score on the desegregation index). The intercorrelation between type of desegregation plan and percent minority in the district is also high but negative, indicating that voluntary plans are more prevalent in districts with a lower percent of minority students. It should be noted that in seven of the eleven districts with court ordered plans, stringent control is not exercised by the source or the plan is not district-wide. The four remaining court plans--the "strong" court plans--tend to have correlational profiles more like those of the voluntary districts. Thus, "strong" court plans are more associated with effective desegregation than are "weak" court plans.

The comprehensiveness of the desegregation plan describes whether all of the district or some subset of the district, such as a particular geographic area or number of schools, has been specified to have a certain racial composition. Not surprisingly, more desegregation is achieved in districts where the total district is involved in the desegregation plan.

Finally, two variables associated with the magnet program effort--the role of magnet schools in the desegregation plan and the percent of minority students participating in the magnet school program--were found to be related to district desegregation. The role of magnet schools (magnet only versus magnet component) has particular policy relevance. The relationship of this variable to district desegregation effectiveness is negative, indicating that more desegregation is accomplished when magnet schools are used as one technique among others to implement the desegregation plan. The

percent minority students participating in the magnet school program--referred to as the scope of the magnet plan--also has a negative correlation with the desegregation index. This finding suggests that when the percent of minority students participating in magnets is high, less desegregation (district-wide) is achieved.

The contextual variables that were found to be important (i.e., highly correlated with the desegregation index) were then entered into a regression equation to determine their relative effects on desegregation effectiveness. Not all variables that were highly correlated with the index were entered into the regression equation. For example, both the type of desegregation plan being used and the percentage of minority students in the school district are highly correlated with desegregation effectiveness. However, these variables are also highly correlated with each other--court ordered desegregation is usually found in districts where there is a high percent minority student enrollment. Therefore, only the variable which was more highly correlated, in this case type of desegregation plan, was used in the regression.

The results indicated that one variable, type of desegregation plan, accounted for the most variance in the desegregation index. In other words, knowing that a district had a voluntary plan is, with few exceptions, an accurate predictor of improvement in desegregation since the introduction of magnet schools in the district.

3.2.2 Community Attitudes

Community support for desegregation and magnet schools can affect the amount of overall desegregation in at least two ways. First, in providing a voluntary opportunity for participation in a school district's desegregation efforts, magnets can encourage majority students to remain in the district, thus having an immediate effect on the proportion white in the district. Second, the aspect of voluntarism often reduces the amount of tension caused by mandatory plans, once again encouraging students to remain in the district.

The correlations of various constituencies for desegregation are, at best, suggestive. The purpose of this study was not to do a survey of community attitudes toward desegregation.* However, site team interviewers did

---

* One objective of the study, assessing the overall effectiveness of the magnet school as a desegregation device, had as a component the major question: Have magnets had an impact on community attitudes toward desegregation?

record their perceptions of the attitudes of various community groups, and this information was used in conjunction with quantitative data in our analyses. The findings indicate that the attitudes of the majority community consistently appear to be more highly correlated with achieved desegregation than do those of the minority community.

It should be noted that any discussion of the effects of magnets on community attitudes toward desegregation must include an appraisal of those attitudes before the introduction of magnets. An analysis of community attitudes as correlated with the achieved desegregation will give some indication of what opinions used to be in the districts visited. However, we realize that this approach poses considerable methodological problems and we have not depended on such correlations alone as proof of changes in attitudes.

Nevertheless, the comments heard during the course of site visits also point to the fact that attitudinal changes have occurred. For example, comments were made by spokespersons of various community organizations that magnet schools offered a chance to have peaceful integration. One such respondent commented, "I don't like busing, but now that I know what's at the end of the line, I won't mind sending my child on a bus." Throughout the various site visits the research teams repeatedly heard of anti-desegregation organizers being the first to send their children to magnet schools. And, as one school official stated, "Once you get the endorsement of the most vocal opponents to desegregation, other people in the community will also send their children to magnets." It still remains to be seen whether or not in the long run magnets will continue to have a positive effect on community attitudes.

3.3 Magnet Program Effectiveness

In proceeding through our analysis, it became clear that the conceptual linkage of measuring district desegregation in terms of the magnet schools in the district was not sufficient. As we saw in Section 3.2, contextual variables like demographics and desegregation history overpowered the influence of individual magnet school contributions. It was decided, consequently, that the magnet effort should be measured in its totality. We have, therefore, developed the concept of the magnet program, which is the combined effort of all of the magnet schools in the district to reach racial composition and enrollment objectives.

In measuring magnet program effectiveness, we are interested in addressing the major question, "Has the magnet program contributed to district desegregation?" An answer to this question can be difficult to ascertain. During our field visits we found that districts use magnets in different ways. For example, magnets may be used to desegregate an entire district, but in other cases they are used to desegregate some portion of a district, such as a specific grade level or geographic area. Magnets may be used primarily for offering a voluntary alternative to one of the most controversial issues of desegregation: busing. While this study does not attempt to evaluate a district on the validity of its purposes in the use of magnet schools, the different ways in which magnet schools are used compounds the problem of determining its effectiveness across districts.

The measure that we have decided to use in determining magnet program effectiveness at the district level is a sum of three variables: first, the racial composition of the magnet program; second, the enrollment potential of magnets; and third, community attitude to desegregation since the advent of magnet schools in a district. This composite score*, when applied to the sample, provides a comparative ranking of districts on magnet program effectiveness.

The first variable in the index, racial composition, is the extent to which a district's magnet program has, on the average, achieved its desired racial composition of minority and majority students. This variable, which we have called Balance, is calculated as the difference between the planned and actual average minority and average majority enrollments summed across

---

* The data from which the various values (by district) for each variable is derived is given in Appendix B; see Tables B-1, B-2, and B-4.

all magnet schools in the district. The variable is extremely important in understanding the contribution of magnet schools to a district's desegregation picture. The empirical evidence indicates that it is from this origin of having a school that is racially balanced that districts feel that steps toward district desegregation can begin. Given that districts rely heavily upon reaching a specific racial balance in the magnet schools, this variable has been given more weight (twice as much) in calculating district scores on the index of magnet program effectiveness.

The second variable, which we call Enrollment, addresses a fundamental question: Can magnet schools attract students? Enrollment attempts to capture how close a district's magnet program comes to reaching its anticipated enrollment. The variable is calculated as the ratio of the average actual to projected enrollment of each magnet school in a district. The rationale for the inclusion of this variable in the measurement of effectiveness is quite simple. If magnet schools are going to have any impact on desegregating a district, they must be able to enroll students.

The two variables Balance and Enrollment have a unique relationship. In order to guarantee the right racial mix, magnet programs can be underenrolled. Indeed, some districts attribute the small numbers of total students participating in its magnet program to this very reason. The ideal situation would be for a magnet program to be both racially balanced and meet its enrollment goals. While any number of individual magnet schools in a district may be operating under such conditions, it is the total magnet effort that we are interested in at this level of analysis.

Finally, the third variable in the composite score of magnet program effectiveness is a measure of change in Community Attitude to desegregation since the introduction of magnets in a district. This variable is important in understanding the long term effect that magnets can have on a district's desegregation plans. The individual values for this variable are based upon the ratings of site team members. Each team was asked to give its perceptions of changes in attitude to desegregation since the advent of magnet schools, based on responses of various educational and community groups. While we acknowledge that this variable represents several kinds of biases, it is an important indicator of the relationship between community attitudes to desegregation and magnet schools.

Using this composite index in assessing magnet program effectiveness has its advantages and disadvantages. An obvious advantage is that the index is a standard measure; thus, we are able to compare districts with each other. Another advantage is that we are able to look at the total magnet program in a district and not merely specific successful or unsuccessful schools. Among the disadvantages is the possibility that the composite score may be masking some findings. (As will be discussed later, this is precisely what happened.) However, since we are more interested in patterns of program effectiveness that may be characteristic of particular kinds of districts than in any one district per se, we anticipate that the composite will lend insight into the understanding of the relationship between magnet schools and district desegregation.

Our measure of district magnet program effectiveness was calculated as follows. The first variable, Balance, was divided into three categories--high, medium and low--based on the balance attained by the district. The high category was assigned a value of three, medium a value of two, and low a value of one. Given that districts rely heavily upon reaching a specific racial balance in the magnets, these values were then doubled. Thus, the eight districts which scored high on Balance were given a value of six for the index on this variable. Six districts scored medium (four points) and four low (two points) on the Balance variable.

The second variable, Enrollment, was divided into two categories: high and low. The ten districts with high scores on this variable received a two; the eight with low scores, a one. Community Attitude, like Balance, was divided into three categories. The values for these categories, however, ranged from one to zero. Thus, a district receiving a score of high on Community Attitude would have that score valued at one; a district with a score of medium would be valued at .5; and a district with a score of low would be valued at zero on the Community Attitude variable. Nine districts scored high, six medium, and three low on this variable.

The districts were ranked as high, medium or low on magnet program effectiveness based on the composite score received on the three variables. Table 3.5 displays the score for each district. Four districts received the highest score on the composite measure of effectiveness, i.e., these districts had achieved a high degree of balance, had reached their total enrollment goals and it was felt that community attitudes to desegregation had improved due to magnets.

Eight districts received a medium score on program effectiveness. Specifically, three districts had programs that achieved a high degree of balance and reached their enrollment, but magnets contributed little to the change in attitudes to desegregation; three districts experienced imbalance and some enrollment difficulty; and two districts experienced difficulty in achieving balance and reaching their enrollment goals. The remaining six districts in the study have low program effectiveness.

Table 3.5

District Rankings on Magnet Program Effectiveness*

District	Balance	Enrollment	Community Attitude	Total Score
Boston	4	1	1	6
Buffalo	6	2	1	9
Dallas	2	1	0	3.0
Dayton	4	1	.5	5.5
Des Moines	2	2	1	5
Houston	2	1	.5	3.5
Jefferson County	4	1	.5	5.5
Milwaukee	6	2	.5	8.5
Montclair	6	2	1	9
Portland	4	2	.5	6.5
Racine	4	1	1	6
Montgomery County	6	2	1	9
St. Paul	2	2	1	5
San Diego	4	1	1	6
Springfield	6	2	0	8.0
Stockton	6	1	.5	7.5
Tacoma	6	2	1	9
Tulsa	6	2	0	8.0

* The districts are divided into three categories of magnet program effectiveness based on their total composite score. The categories are: High, which is a score of 9; medium, which ranges from 8.5 to 6; and low, which has a range of 5.5 to 3. The raw data for this variable is given in Appendix B.

3.4 Correlates of Magnet Program Effectiveness

What factors might account for the varying scores achieved by the school districts on magnet program effectiveness? We examined the relationship between their scores and a number of variables through the use of correlational analysis. Several variables were correlated with magnet program effectiveness. The variables which seem most relevant to this analysis include the amount of desegregation achieved prior to the advent of magnets in the district; the type of desegregation (voluntary or involuntary); the scope of the magnet effort; and the support of the minority community for the magnet effort.*

The amount of desegregation achieved prior to the introduction of magnet schools in the district is the value of $\frac{Smw}{D}$ the year before magnets were introduced. The higher the value (i.e., the more desegregation achieved), the higher the districts were scored on magnet program effectiveness. The interpretation of this finding is that magnets will have little difficulty in attracting students and meeting enrollment goals when a given amount of desegregation has already occurred. The data further indicate that when districts desegregate voluntarily, they can be expected to have higher magnet program effectiveness. Here again, this would suggest that districts which have a "calmer" situation for desegregation would have fewer problems in reaching racial composition and enrollment goals of magnet schools.

The scope of the magnet effort is positively related to magnet program effectiveness. This variable is defined as the percent of minority students participating in the magnet program in the district. It would seem that when the percent of minority students served by magnets is high, the district score on magnet program effectiveness can also be expected to be high.

The support of the minority community for the magnet effort is a fourth important variable. When the minority community support for magnet schools was high, districts achieved a racial balance of students and met enrollment goals in their magnet schools.

It is interesting to note that variables which assessed the processes of planning and implementation of magnet schools did not correlate with magnet program effectiveness. However, relationships were found when the three

---

* Table B-4 in Appendix B displays the correlation matrix of these variables.

components of the index of magnet program effectiveness were analyzed separately. The variable found to be most correlated with the Balance variable of the composite measure is needs assessment. That is, where a needs assessment was conducted as part of the planning for magnets, there was a tendency for programs to be racially balanced. The Enrollment variable was correlated with the percent minority in the district and type of desegregation plan. In this instance, the higher the percent minority in the district, the harder it was for districts to meet their projected enrollment. Finally, in the case of type of desegregation plan, a voluntary plan was found to be positively correlated with Enrollment.

In this section, the effectiveness of magnet school programs, that is the aggregation of all magnet school experiences in a district, has been examined. Once again those districts which could be considered as "more ready", (where more desegregation had already occurred and where there was "voluntary" desegregation), established the more effective magnet school programs. The lack of a strong relationship with the variables reflecting planning and implementation processes for the magnet schools would indicate that such factors are of limited utility for program development as a whole. However the support of members of the minority community suggests that planning of the individual schools and working with the affected neighborhoods are of importance. The lack of significant relationships between the planning variables and magnet program effectiveness probably is masked by a sense of underlying interactions between community groups, types of planning activities undertaken and the characteristics of the district. This suggests that there is a need for a better understanding of the planning and implementation processes which should be helpful in providing guidance to districts, particularly in reference to the awarding of planning grants.

3.5 Assessing the Contribution of Magnets to District Desegregation

The methodological question that arises at this point is: How can we assess the overall effectiveness of magnet schools as a desegregation device? Two factors must be compensated for in making such an assessment. First, while the analysis presented in this chapter takes as the primary indicator of the effectiveness of a magnet program the achievement of desegregation in its totality, our data indicate that districts make differential use of magnets. Second, the small sample size makes any detailed quantitative investigation into the effectiveness of magnets as a tool in desegregation impossible. The approach herein described takes these factors into account in making an assessment of magnets as a tool for effective desegregation.

For the purpose of this study, we propose that districts which exhibit a high amount of achieved desegregation (as measured by the index of desegregation effectiveness presented in Section 3.1) will also have a high amount of magnet program effectiveness (see Section 3.3). The proposition is based on the assumption that under favorable conditions for desegregation, magnets will have little difficulty in attracting students, meeting enrollment and racial composition goals and ultimately contributing to the desegregation of the district. From this proposition we can investigate conditions under which deviations from this "ideal type" occur.

Using the categories of high, medium and low on both the indices of district desegregation and magnet program effectiveness, we have created the 3 x 3 matrix displayed in Figure 3.1. The 18 districts fall into nine subgroups, each of which represents a level of program effectiveness and desegregation effort. This classification enables us to discuss the relative contribution of magnet programs to overall district desegregation. A qualitative description of the inter- and intra-cell differences will be offered. This approach in assessing magnet program effectiveness is advantageous in two ways. First, it does not impose any criteria of effectiveness on the districts. Thus, the fact that districts use magnets differently can be taken into account in the discussion of findings. Second, there is the opportunity to explore <u>patterns</u> of desegregation among the districts by using a less structured approach.

It is important for the reader to be aware of both the basis for and limits of this approach. The basis for our analyses are the enrollment and racial composition data which are used in the construction of the appropriate indexs measuring district desegregation and magnet program effectivness. This analysis, therefore, does not attempt to assess the educational quality of the magnet programs or magnet schools in any of the individual school districts. These statistical data are supplemented by the findings from the information gained through the site visits. Finally, it is important to remember that the rankings of districts is done relative to the districts within our sample. Therefore, the rankings of "High" or "Low" for example cannot be taken in any absolute sense, only in relation to the 18 districts in this study.

Figure 3.1

Magnet Program and District Desegregation Effectiveness

Magnet Program Effectiveness	District Desegregation Effectiveness: High	Medium	Low
High	Montclair*	Buffalo Montgomery Co.*	Tacoma
Medium	Racine	Boston* Milwaukee Portland Springfield* Stockton*	San Diego Tulsa*
Low	Des Moines* Jefferson Co.* St. Paul*	Dayton*	Dallas Houston

* Magnet Component Districts

3.5.1 High District Desegregation and Magnet Program Effectiveness

Only one district, Montclair, was high in district desegregation as well as in magnet program effectiveness. In this district, a great deal of desegregation had already been accomplished prior to the introduction of magnets and, as an examination of Table 3.3 shows, the magnet school program appears to have had little impact on racial balance in this case. What distinctively characterizes this magnet program, however, is its selective use to deal with schools of increasing minority population.

Montclair's program serves 31% of the district's total student population and 32% of the minority student population. The program's effort is concentrated at the elementary level; as a result, 75% of the district's minority elementary students attend magnets. The magnet schools have been able to attain their racial balance and enrollment goals and thus, the program is given a high score in program effectiveness.

One district was given a medium score on magnet program effectiveness though high on district desegregation. Racine, unlike the other high desegregation districts, has a magnet only desegregation plan. The district had undergone considerable desegregation prior to the advent of magnets. Since Racine has a small percentage of minority students and its magnet schools program serves only two percent of the student population, we conclude that its magnet contribution to the desegregation of the district is small.

The remaining three districts which were high on district desegregation were low on magnet program effectiveness. In each of these cases, a significant amount of desegregation had occurred prior to the implementation of magnets. In Des Moines, Jefferson County and St. Paul, magnets serve a small percentage of the student population (ten percent, two percent and ten percent, respectively). Again, the percent minority in the district would appear to be a crucial factor in the magnet contribution to the desegregation effort. In addition, when this variable is considered along with the role of magnets in a district's plan (magnets are only one of the techniques used in accomplishing desegregation), an explanation of the behavior of highly desegregated districts which are low in magnet program effectiveness can be made.

In Jefferson County, for example, the district is 24% minority but only two percent of these students participate in magnet programs. Since all schools are included in this desegregation plan, and since magnet schools are but one technique used, we can infer that magnets contribute little by way of

desegregating students. For Des Moines and St. Paul, the numbers of minorities participating in magnet programs increases slightly, although the minority population is comparatively small. But the small size of the magnet population and the few schools involved have not affected the district level desegregation directly. The magnet schools in these districts may help to desegregate certain schools or areas of the district, but the contribution of these programs is not sufficient, in and of themselves, to achieve a high degree of district desegregation.

3.5.2 Medium District Desegregation and Magnet Program Effectiveness

Eight of the districts were scored medium on district desegregation. Of these, two were high in magnet program effectiveness. As in the case of the highly desegregated districts, knowing the percent minority in the district and the percent of minority students participating in the magnet program enhances our understanding of the magnet program's contribution to the desegregation effort. In addition, the purpose for which magnets are used for desegregation also lends insight into the way magnets help desegregate a district.

In Buffalo, the school population is slightly more than 50 percent minority and about 16 percent of the minority students participate in the magnet program. However, the magnet program is limited to the elementary schools and it is this fact that accounts for the limited contribution of magnets to the desegregation of the district. As long as magnets remain on the elementary level and the rest of the school district remains stagnant in desegregating its students, this will not change. In a sense, Buffalo epitomizes the problem of magnets for the opponents of the program: No matter how good the program may be, it does not eliminate the need for a comprehensive district-wide desegregation plan.

Montgomery County, the other district with medium district desegregation but high magnet program effectiveness, had a great deal of desegregation already accomplished prior to the introduction of magnets in the district. While ten percent of the county's minority population attends magnets, the magnet school program is targeted geographically, being aimed at those schools in one area of the county that have experienced a sudden growth in minority attendance. This focus on a particular set of schools (elementary and junior high schools) adds to the amount of district desegregation.

In the five districts which have medium program effectiveness, all but one (Portland) have a high (over 30%) percentage of minorities in the district. The percent of minority students participating in the magnet program and the role of magnets in the desegregation plan offer the same insights as to the extent of the magnet contribution to the desegregation efforts of the districts. For example, in Milwaukee, over 40% of all students participate in magnet programs and 38% of all minority students attend magnet schools. In Stockton, a magnet component program, only two percent of minorities participate in magnet programs indicating that the success in district desegregation is achieved through other means. Despite Milwaukee's high program participation compared to that of Stockton, district desegregation is limited, since other desegregation techniques are little used (i.e., Milwaukee has a magnet only plan).

Finally, in Dayton, a district with medium district desegregation but low magnet program effectiveness, eight percent of the total student population and nine percent of the minority students participate in magnet programs. Again, given the high (54%) percent minority in the district, it would appear that magnets do not contribute a great deal to total district desegregation.

3.5.3 Low District Desegregation and Magnet Program Effectiveness

The remaining five districts in our sample all scored low on district desegregation.

Tacoma has had the longest operating magnet program of any district in the sample. The intent of the program was to desegregate particular elementary schools which had a high proportion minority. Because of the small percentage of minority population, the desegregation of these schools assisted the district to achieve a high level of district desegregation. However, this trend has leveled off, resulting in a low district score on desegregation effectiveness, even though its absolute index of desegregation is among the highest in the sample.*

---

* It will be recalled that our measure of desegregation effectiveness reflects changes in desegregation over time.

In the medium category of program effectiveness are San Diego and Tulsa. Again, these are districts whose magnets serve a small percent of students (8% and 4% respectively).

Finally, the low district desegregation/low program effectiveness category includes two districts, Dallas and Houston. In both of the cases, the percent minority in the district is high (65% and 69% respectively), and the magnet program is the major technique being used to desegregate the district. However, in both cases a very small percent of students participate in magnet programs (7% for Dallas, 8% for Houston) as well as a small percent of minorities (8% and 5% respectively). Thus, in these two districts it would appear that magnets, because of their limited coverage of the population, have contributed very little to district desegregation.

From the above brief description of the categories of desegregation and magnet program effectiveness, it would appear that several factors (percent minority in district, role of magnets in plan, etc.) contribute to an understanding of the magnet program's contribution to district desegregation. What has not been discussed, however, are the deviations from the ideal type first proposed at the beginning of this section.

For example, how can a district which is low on district desegregation be high on magnet program effectiveness? If we look at Buffalo more closely, we see that its magnet program exists only at the elementary level. The data reveal that roughly 23% of all minority elementary students participate in magnets. Thus, the contribution of magnets might seem more significant than previously stated. What this means, however, is that the elementary level is being desegregated while the rest of the district goes untouched by the desegregation plan. In another instance of medium program effectiveness and low district desegregation (San Diego), we see the effects of only a limited number of schools being identified and included in the desegregation plan. Hence, magnets are an attempt to improve racial balance in those cases and not through out the total district.

Finally, the above discussion focused on magnet schools as desegregation devices mainly in terms of the equitable distribution of students. Magnets can also affect community attitudes and indeed there are instances where a district's magnet schools are balanced and have almost reached enrollment goals, but in which community attitudes to desegregation have not improved.

3.6 Summary

This chapter investigated the relationship between magnet school programs and effective school district desegregation. Those factors which were related to district desegregation effectiveness were primarily contextual and demographic. There was little in the analysis to directly tie magnet characteristics to district-wide desegregation effectiveness. However, it is clear that magnet schools are effective in a more limited capacity, namely, that they are capable of providing a quality, integrated education in particular schools or in a particular limited geographic area. Where there are the relative successes in the use of magnets in district-wide desegregation, magnet programs have been used to desegregate particular schools where such desegregation has a direct impact upon district schools' racial composition and where the magnet schools are used in conjunction with other effective desegregation techniques so that comprehensive desegregation is taking place. Therefore, it is possible to have an effective magnet program, defined in terms of the program's ability to meet its racial composition and enrollment goals and to influence community attitudes, and yet have that program not be effective in district desegregation. From these data, it is concluded that magnet programs are not substitutes for comprehensive desegregation programs, but may be effective adjuncts to such programs.

It was shown, further, that effective magnet programs were found in those communities which had a positive history of school district desegregation and in communities in which the potential difficulty for desegregation (as measured, in part, by percent minority in the district) was lower. The impact of community and planning variables in helping to understand those factors and conditions which influence the success of a magnet school program is not strong nor unambiguous. It is clear, however, that different factors must be taken into account in drawing majority or minority students into the program. Much more research must be undertaken to assist school districts in attracting and retaining the student population and the support of the majority and minority communities.

CHAPTER FOUR

MAGNET SCHOOL EFFECTIVENESS AND ITS CORRELATES

4.0 Introduction

The major purpose of this chapter is to identify correlates of magnet school effectiveness. We look at the magnet schools in our 18 districts to determine what factors contribute to their success. Among our findings are the following:

- In general, magnet schools are effective in attaining their desired racial composition and enrolling the desired number of students of both races.
- Adults interviewed in 61 sampled schools agreed on reasons their magnet schools appeal to students and parents: the quality of the school program, the voluntary nature of magnets, and the fact that they give problem students "another chance."
- Three relatively important correlates of magnet school effectiveness are the type of program, school location, and attendance structure (i.e., area served by the school).

The policy implications of these and other findings are discussed at various points in the chapter.

This chapter begins with a consideration of methodological issues (Section 4.1). Section 4.2 discusses general magnet effectiveness and Section 4.3 discusses elements of magnetic appeal. Section 4.4 presents major correlates and their relative importance, and Section 4.5 reports on other school variables of interest. Supporting data for this chapter are included in Appendix C.

4.1 General Analytic Approach

In exploring the correlates of magnet school effectiveness, we must address two basic methodological questions. These are:

- What do we mean by magnet school effectiveness?
- How do we identify correlates of effectiveness?

While our approach to each of these questions is described in detail in the Technical Appendix, it is appropriate to give a brief overview of our methodology prior to presenting our findings. Our approaches to defining effectiveness and identifying correlates are discussed separately in the following sections.

4.1.1 Defining and Measuring Magnet School Effectiveness

In defining effectiveness, we have focused on the most basic dimension of magnet school success, i.e., the ability to attract students. Our rationale for such a focus is quite simple. Before a magnet school can have any impact on district desegregation, it must be able to draw students of both races. In other words, it must be able to "get off the ground" as a school.

However, it is necessary to take into account two distinct aspects of a school's ability to attract students. These are its ability to enroll the desired number of pupils and its ability to attain an appropriate racial mix for the students enrolled. These aspects of school success, while related, are not identical. Our field visits revealed that districts usually give priority to racial composition, sometimes at the expense of the number of students enrolled. For example, a district may seek to attain a 50/50 racial composition in a magnet school--50 majority students and 50 minority students. However, if the school proves able to attract only 30 majority students, the district may hold minority admissions to 30. Although the racial composition of the school is balanced, the school is, nevertheless, underenrolled by 20 students of each race. In short, the school has conformed to racial composition guidelines at the price of underenrollment, indicating some inability to attract students.

At the beginning of this study, we had hoped to develop a single, composite measure that would combine both aspects of effectiveness. However, we concluded that a single, composite index has little, if any, utility, and, in fact, may be misleading. Specifically, such an index masks interesting

and policy relevant findings. First, it obscures the distinctions that the school districts themselves make between enrollment and racial composition goals. Second, we found (as reported in subsequent sections of this chapter) patterns indicative of correlate/race interactions in relation to enrollment. For example, some correlates appear to be quite important in meeting majority enrollment goals but of little consequence in meeting minority enrollment goals. The use of a single index would completely obscure this finding.

In light of these considerations, we have chosen to utilize several variables or indices in assessing effectiveness. Our measure of a school's ability to meet enrollment goals is fairly straightforward. We call it the subscription rate; it is simply the ratio of observed to projected enrollment for the 1977-78 school year. The minority and majority subscription rates are calculated separately for each school.

We use the subscription rates to assess a school's ability to achieve racial composition goals. The difference between these two ratios, observed/projected minority enrollment and observed/projected majority enrollment, is our measure of the proportion of students from each group in the school. In taking this approach, we have assumed that district enrollment projections for the minorities and majorities in a school reflect racial composition goals.

As explained in Section 4.1.2, we use correlation and regression analysis to explore the possible correlates of magnet school effectiveness. Generally, for these techniques dichotomous variables are less desirable than continuous variables. For this reason, a simple comparison of observed racial composition to desired racial composition (meets goal/does not meet goal) would be unsatisfactory. In addition, since most of our magnet schools fall within their "legal" racial composition criteria (see Section 4.2), such a measure would have very little variance, an undesirable situation in any statistical analysis.

For these reasons, we have made subscription rate a trichotomous variable. The analyses reported in Section 4.4 distinguish between a school's ability to meet its enrollment goal (within 85% of the target), and the tendency to overenroll (more than 115% of the target). As with subscription rate, these indices are computed separately for each race. It became apparent during our investigation that the use of these more specific indices of enrollment patterns in conjunction with the overall subscription rate index offered a richer analysis than did reliance on any single measure for each race.

4.1.2 Identifying Correlates of Effectiveness

In identifying correlates of magnet school effectiveness, we have examined, by means of both simple correlation analysis and multiple linear regression, the relationships between our effectiveness measures and several aspects of magnet schools. Our analysis is generally based upon the entire population of magnet schools for which data were available rather than upon the sampled schools alone.

As the first step in our analysis, we computed simple correlations between all effectiveness measures and the school variables. (The variables most highly correlated with the effectiveness measures are discussed in Section 4.4). Not surprisingly for an exploratory study, the correlations between the school variables and our effectiveness measures were generally low. Nonetheless, the simple correlation analysis proved extremely useful in identifying which variables are important as correlates of effectiveness. In making this determination, we established two decision rules to guide us in sorting through the large number of coefficients. First, we applied criteria of statistical significance to the correlation coefficients as a screening device. While the level of significance applied varies (ranging as high as .005 in some cases), we did not consider notable any correlations with a significance level less than .15.

Second, we relied on the pattern of relationships between a school variable and all effectiveness indices rather than on any single coefficient in drawing conclusions about its importance as a correlate. For example, a school variable may show a strong positive correlation with ability to meet minority enrollment goals and no notable correlation with any other effectiveness index. In contrast, another school variable may show weaker relationships with several of the effectiveness measures. The latter variable is considered more important as a correlate than the former.

As might be expected, not all of our school variables emerged as important correlates. In fact, only three--type of program, type of location, and attendance structure--were active enough to warrant additional investigation by means of multiple regression analysis. The purpose of this second step in our investigation was to determine the relative importance of the most active correlates.

In determining relative importance, we have relied on patterns of results (as in our basic correlation analysis). For each effectiveness

measure, we have generated several regression models which vary according to the order of entry of the correlates (or predictors). For example, in the first model, program type is entered first, followed by attendance structure and location. In the second, program is again entered first, but the order of entry for attendance structure and location is reversed. Where a predictor consistently accounts for a large amount of variance, regardless of its order of entry in the models, it is considered of greater relative importance as a correlate of the effectiveness measure in question. To assess its overall importance, we then look at its performance across all the effectiveness measures.

4.2 General Magnet Effectiveness

In general, it appears that the magnets in our 18 districts are able to meet their racial composition goals.* As Figure 4.1 shows, our measure of this element of effectiveness ranges from 0-25, with 25 indicating that goals are met. Obviously, the majority of magnet schools in our 18 districts either achieved or came close to achieving their racial composition goals for the 1977-78 school year. At the elementary/junior high level, 66% of the magnets had scores of 23 or better. At the secondary level, 60% of the schools fell into this range. Only 26% of both the elementary/junior high and secondary schools had scores of 20 or less.

It also appears that the magnets are generally able to meet enrollment goals for both races. Figures 4.2 and 4.3 show the subscription rates for the schools in our sample. Here, a score of 0 indicates that a school has met 0% of its enrollment goal, and a score of 20 means a school reached 200% of its projected enrollment. As Figure 4.2 shows, at the elementary/junior high level 69% of the schools attained at least 90% of their projected minority subscriptions, while 75% attained this level of majority enrollment. Similar distributions are found at the secondary level (see Figure 4.3). Here 66% of the magnets attained at least 90% of their projected minority and majority enrollment.

While the general ability of magnets to meet enrollment goals is quite good, a certain portion of schools--particularly at the secondary level--do appear to have severe problems in meeting goals. At the lower grades, we see that 11% and 15% of the schools attain 60% or less of their projected majority or minority enrollment, respectively. At the secondary level, such problems are apparent in almost twice the percentage of schools (22% and 29%, respectively).

This is somewhat surprising and counter-intuitive. One would expect enrollment problems to be found in greater measure at the lower grade levels since parents of younger children are usually much more reluctant to leave the neighborhood school, primarily out of concern for safety.

It may be, however, that the pull of the nearby school is even greater at the secondary level, albeit for different reasons. First, transportation problems (e.g., length of time involved) may mean that attendance at a magnet school precludes involvement in the extracurricular and school-related social

---

*It should be remembered that these goals differ from district to district. Table 2.2 summarizes each district's racial composition goals.

activities which are an important part of the high school experience for many students. Second, the "neighborhood" or nearby high school may have a powerful pull of tradition and identity or "school spirit." Older brothers and sisters may have attended the school, played on the football and baseball teams, been active in clubs, etc. Perhaps even more importantly, the friends made in the lower grades may be planning to attend the local high school rather than the magnet. In sum, it may be that under certain circumstances (i.e., where an attractive "neighborhood" high school is available), secondary magnet schools must be very attractive indeed in order to meet enrollment goals.

Figure 4.1

Ability to Meet Racial Composition Goals, 1977-1978

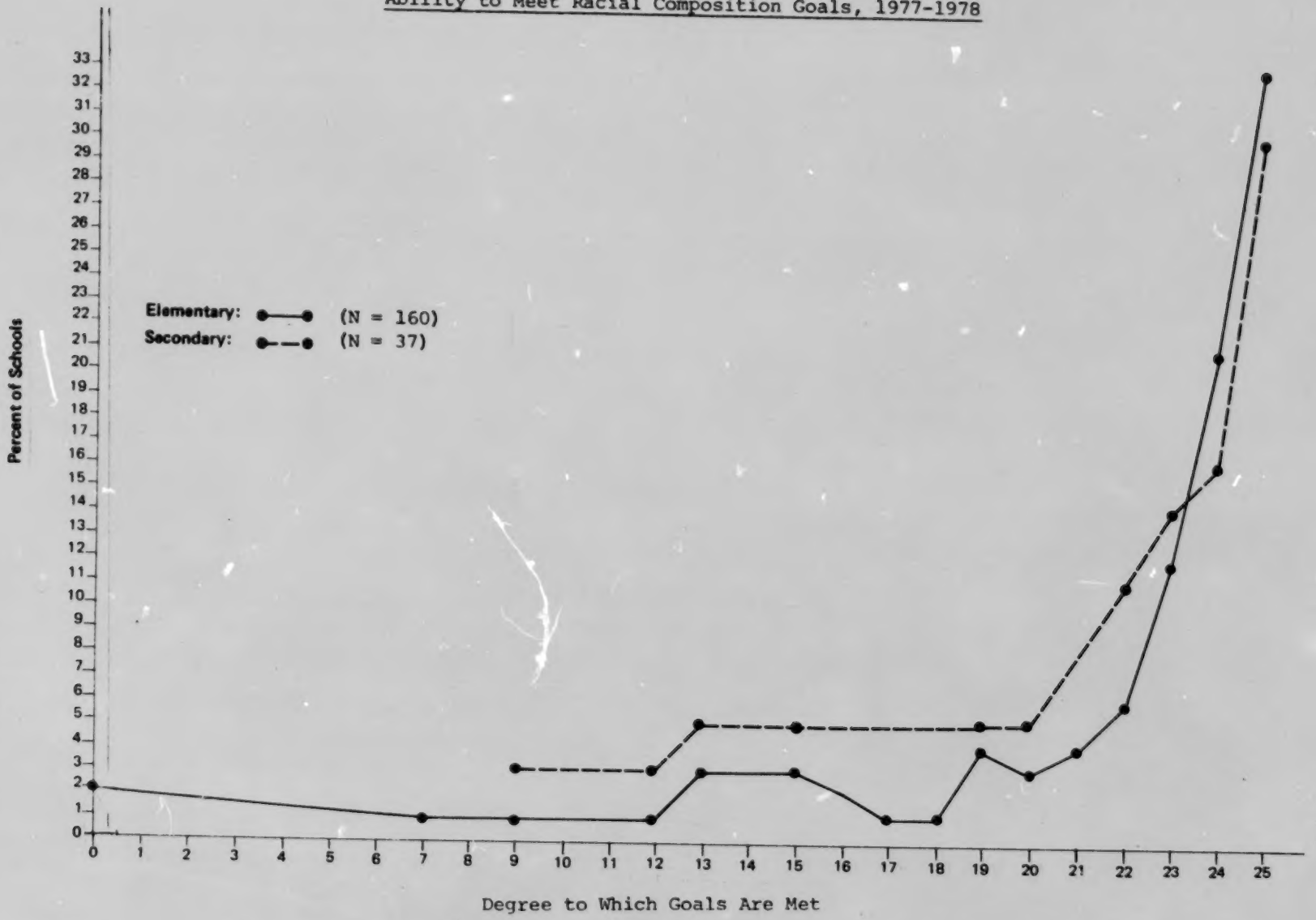


Figure 4.2

Percent of Schools Attaining Projected Enrollment by Race for Elementary School

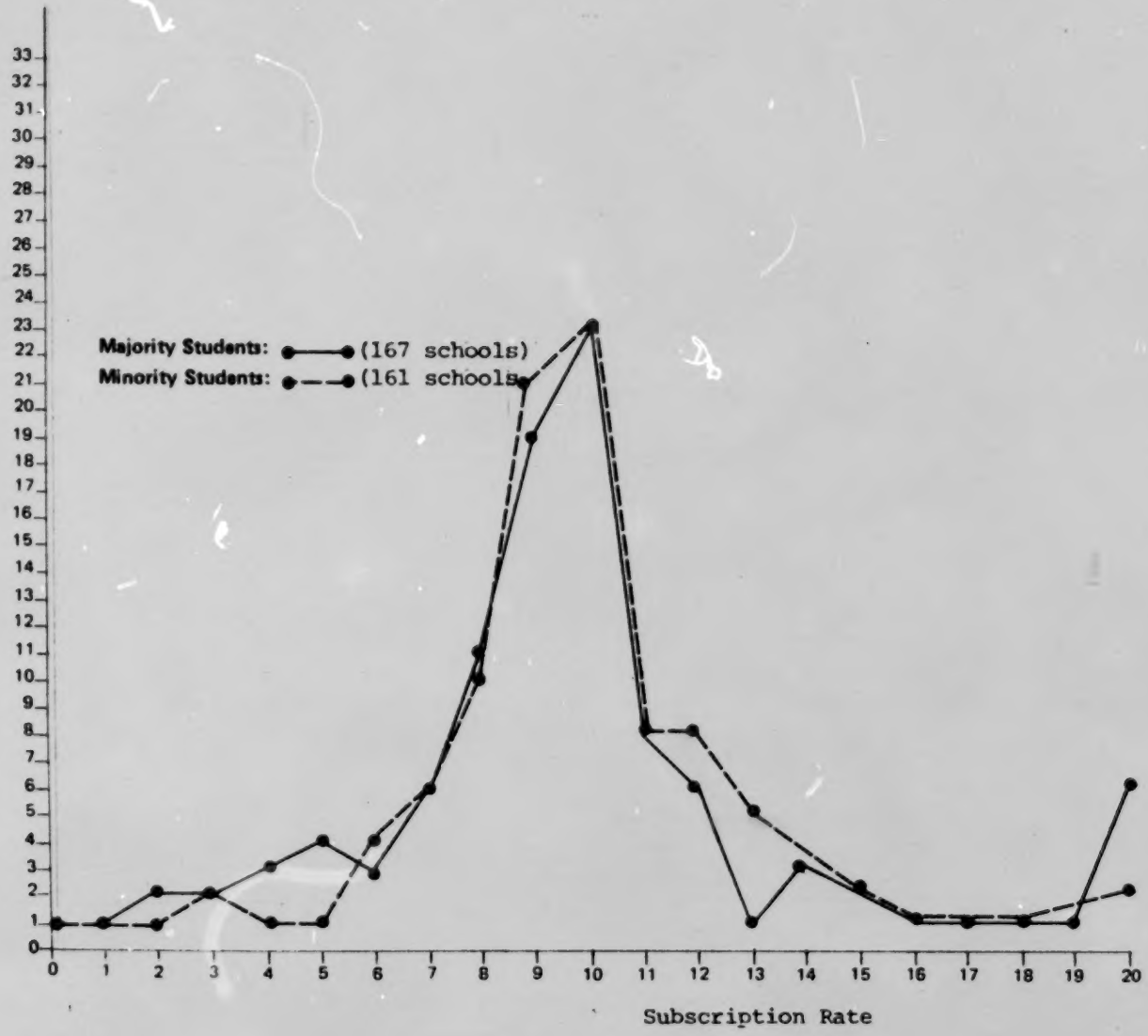
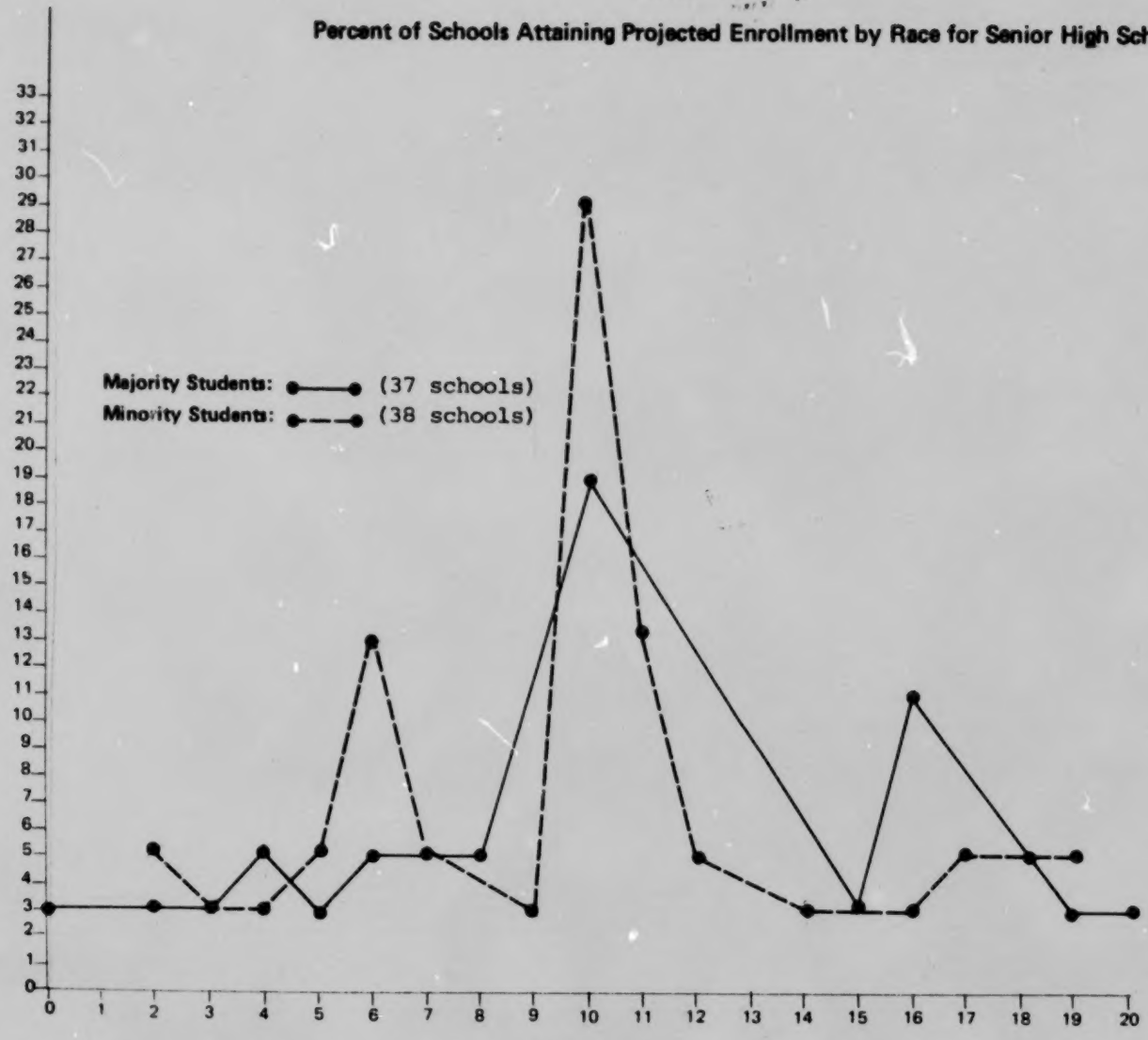


Figure 4.3

Percent of Schools Attaining Projected Enrollment by Race for Senior High Schools



4.3 Elements of Magnetic Appeal

One of the first questions that often arises about magnet schools concerns the elements of magnetic appeal. In other words, just what is it about magnet schools that appeals to students and/or their parents? While the scope of this study did not permit intensive examination of this issue, our data did permit some exploration. In visiting our 61 sampled schools, we asked the principals, teachers, and parents a variety of questions concerning the elements of appeal of their particular school. (obviously, each school might have several features that contributed to its overall attractiveness.) The following appeal factors were extracted:

- Program
- Faculty
- Principal
- School location
- Quality of the school plant in general
- Opportunities the school provides for parent involvement
- Voluntary nature of magnets, aside from all other factors
- Opportunity the school provides as "another chance" for children who are perceived by their parents as having academic and/or social problems.

While most of these appeal variables were not found to be statistically correlated with our measures of effectiveness, they may still be associated with the success of magnet programs. They were, after all, mentioned by our interviewees as important components of attractiveness for their school. And, in many (if not most) instances, these schools were perceived by central administrators as the most popular and successful magnet schools in the district. Thus, the appeal variables offer some insight as to what magnet school users consider to be attractive.

Table 4.1 displays the frequency with which the various elements of appeal were mentioned as important for both elementary/junior high and secondary schools. As we can see immediately, the relative importance (i.e., frequency of mention) varies somewhat according to grade level. For both grade levels, the four most frequently mentioned elements of appeal are remarkably consistent. In fact, three of the first four are identical. These are:

Table 4.1

Number and Percent of Magnet Schools for Which Various Elements of Appeal Contribute to Overall Appeal of School

Grade Level	Total N Sampled	Program		Quality of School Plant in General		Location of School		Opportunities Program/School Provides for Parent Involvement		The Principal		The Faculty		Voluntary Nature of Magnets		The Opportunity the School Program Offers as "Another Chance" for "Problem Children"	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Elementary/ Junior High	43	43	100	23	53	13	30	25	58	22	51	34	79	32	74	26	60
Senior High	17	17	100	4	24	8	47	3	18	6	35	9	21	13	76	10	59

- The program, which ranks first for both levels;
- The voluntary nature of magnet schools, which ranks third for the lower grades and second for the upper; and
- The opportunity the school provides as "another chance" for problem children, which ranks fourth for lower grades and third for upper grades.

It is, of course, not surprising that program ranks first for both grade levels. However, the ranking of the other two elements--the voluntary nature of magnets and their "another chance" aspect--is rather unexpected and warrants some discussion.

In some three-fourths of our sampled schools, the voluntary nature of magnet school attendance was indicated as an important factor in the school's appeal. In other words, the opportunity to volunteer for the magnet per se was an important element of attractiveness. It is critical to note that this volunteerism element appears to be largely independent of program. It appears, instead, to reflect the strength of parental desires to have some control over where their children will attend school; after all, desegregation often means that children are transferred to "unknown" schools.

The "another chance" aspect of magnets refers to the opportunity the magnet school offers to children who are perceived by their parents as having behavioral or academic problems at their present school. Such problems may not yet have reached the point of requiring action by teachers or principals (e.g., suspension or placement in remedial groups). Nevertheless, the parents feel that "it is only a matter of time" or the child is "just not doing as well as he could (or did last year)." These parents see the magnet school as "another chance" for the child and therefore seek a transfer.

This "another chance" was mentioned as an appeal factor for some 60% of our 61 sampled schools. Since magnet schools have been criticized for a tendency to skim off the better students from other schools, the emergence of this "another chance" issue is especially interesting. It suggests that magnet schools may attract students at the lower end of the achievement/social adjustment distribution at least as much as they attract those at the top. In fact, many of our interviewees seemed to feel that if skimming occurred, it was indeed the problem (or potential problem) students who were skimmed, not the high achievers. Lending credence to this speculation is the fact

that, in several cases, principals and central office staff spontaneously mentioned the problem they were encountering in providing adequate services to the unexpectedly large numbers of lower achieving, "problem" students who had chosen to attend magnet schools.

Both of these findings have interesting policy implications. First, the fact that the voluntary nature of magnets was so frequently mentioned as an element of appeal suggests that magnets may be especially useful as desegregation tools in districts with widespread, mandatory desegregation, particularly those that also make significant use of busing. In such situations, there is generally a good deal of hostility and resistance to the desegregation process. The opportunity to volunteer for a magnet school may encourage parents to actively accept desegregation via magnets as a means of retaining some degree of control over which school their child attends. Although the magnet choice may be seen essentially as the lesser of two evils, significant amounts of hostility and resistance may nevertheless be defused by the simple opportunity to volunteer, or to have freedom of choice.

A good example of such a use of magnets is provided by Boston. Here the court used magnets as a key element of the desegregation plan. Its express purpose in doing so was to make desegregation more palatable to an extraordinarily hostile and resistant majority community. While it is impossible to say with any authority what Boston desegregation would have been like without magnets, interviewees in Boston seemed to feel that the magnets have indeed helped to defuse hostility and promote acceptance of desegregation.

Second, the "another chance" aspect of magnet appeal suggests that implementors of magnet schools must be prepared to serve a wide range of abilities--both academic and social--in the magnet classrooms. At a minimum, districts should anticipate the potential for lower-end skimming and prepare to identify this phenomenon as it occurs. Teachers should then be provided with necessary assistance and/or in-service training so that they are better able to manage a classroom that contains a wide range of abilities.

Beyond the four most frequently mentioned elements of appeal, rankings varied more notably for elementary and secondary levels. As Table 4.1 shows, the opportunity the school provided for parent involvement in the child's education ranked fifth at the elementary/junior high level and last at the secondary, which is not surprising considering that parent involvement declines in the upper grades. Appeal of the principal ranked fifth at the secondary level

and next to last for elementary/junior high grades. In contrast, the appeal of the faculty ranked next to last at the secondary level and second at the lower grade levels. We can offer no empirical explanation for this ordering of the appeal of faculty and principal. We can, however, speculate that districts may have somehow communicated a sense of an especially high caliber, well-trained faculty in the "special" magnet program as part of the student recruitment effort in the lower grades. In contrast, the appeal of the principals may be more a function of their personal reputation and high school principals may have greater visibility.

Another somewhat surprising finding is that location was the fourth most frequently mentioned element of appeal for the secondary grades. While we expected location to be a factor in a school's ability to draw students (as the analysis of correlates indeed indicated), we did not anticipate that it would be cited as an important positive element of appeal. Yet it was mentioned as such with notable frequency at the secondary level. (It should also be noted that while it ranks last as an element of appeal at the elementary/junior high grades, it was nevertheless mentioned for 30% of the schools at this level.) Once more, at this point, we have no empirical explanation of location is related to ease of transportation, especially at the secondary level, or to parents' concerns about their child's safety in a different racial neighborhood.

Finally, we see that the general quality of the school plant ranked sixth as an element of appeal for both grade levels. This low ranking is not surprising and is, in fact, rather encouraging. It suggests that while an impressive physical plan may be a nice plus, it is not enough to attract students. This suggests that students will not find a less than impressive physical plant a detriment.

In conclusion, we find that magnetic appeal as described by principals, teachers, district administrators, and magnet parents has several elements. The most important of these, for both elementary/junior high and secondary levels, are the program, the voluntary nature of magnets, and the opportunity the school offers as "another chance" for children whose parents perceive them to be having problems.

Beyond these most important three, the relative importance of the various elements diverges by grade level. At the elementary/junior high grades, the appeal of the faculty appears to be important and that of the principal

much less so. This pattern is reversed at the secondary level. Opportunities for parent involvement have some importance as a factor of attractiveness at the lower grades but are last in frequency of mention at the secondary level. This pattern is reversed for the element of location. Finally, the general quality of the school plant is ranked low in importance for both grade levels.

4.4 Major Correlates of Magnet School Effectiveness

From our analysis of the relationship between our school variables and our effectiveness measures, three variables were found to be highly correlated with magnet school effectiveness. These were:

- Type of program
- Type of school location
- Type of attendance structure

Each of these variables and its relative importance to the measure of effectiveness is discussed separately in the following sections.

4.4.1 Type of Program

As we discussed in Chapter Two, the magnet schools in our 18 districts offer a wide variety of programs. For the purposes of this analysis, we have classified these programs into four types, i.e.:

- Special academic focus (or academic), which includes performing arts programs; science, math, and technology programs; language, humanities, and multicultural programs; and academic honors programs;
- Vocational programs, which range across occupational categories from legal secretary to business management;
- Non-traditional programs, which while encompassing a wide variety of curriculum emphases, commonly stress the need for the child to follow his/her interests and to proceed through the learning process at his/her own rate; and
- Traditional programs, which stress the mastery of basic skills (reading, writing, and arithmetic) and discipline and orderliness of behavior in the classroom and school environment.

The most frequently occurring program types for the 227 magnets are the academic (36%), followed by the non-traditional (27%), the traditional (18%), and the vocational (10%).* The distribution of program type varies by grade level. At the elementary/junior high level, there are very few vocational programs. At the secondary level, there are no non-traditional programs and very few traditionals. Thus, in assessing the relationship of program types to effectiveness measures, we have conducted separate analyses by grade level.

---

* A small percentage of programs (10%) falls into a miscellaneous category and is not analyzed for correlates of effectiveness.

At the elementary/junior high grades, it appears that the non-traditional program type is far more strongly related to effectiveness than either of the other two program types found at this level. (See Table C-3, Appendix C.) In other words, non-traditional magnet schools are most likely to meet enrollment and racial composition goals. Considering the amount of attention recently given to the "back-to-basics" movement in education, this is rather surprising. While the traditional programs do appear to be attractive (perhaps slightly more so for minority students than for majorities), it is clear that they are not as attractive as the non-traditionals.

Speculating, we may attribute this finding to one or both of two underlying phenomena. First, the "back-to-basics" may be related to socio-economic status (SES). Specifically, it may be that magnet students are either predominantly middle SES or have middle SES values and aspirations. Unfortunately, this study did not permit detailed exploration of this issue.

At the senior high level, we find only two program types, the academic and the vocational. Neither type emerges as more positively related to effectiveness (see Table C-4, Appendix C). However, the academic programs do appear to be far more attractive to majority students than to minorities. In fact, these programs seem to have notable problems meeting minority enrollment goals, while at the same time actually overenrolling majorities.

This pattern leads us to inject a note of caution in regard to magnet schools at the secondary level. Our data do not completely support the contention that minorities are attracted to vocational programs while majorities are attracted to academic programs. However, there is often enough evidence in this direction to warrant raising the issue. If such a pattern of preference actually obtains, special care may be required to insure that academic programs do not become a means by which majority students can escape real desegregation while receiving a "prep school quality" education. There is some evidence from our more subjective site visit data that this can indeed happen. In one or two sites, the secondary magnets are seen essentially as private schools of the upper middle class majority community.

In summary then, we find differences in the distribution of program types and in the relationships between program type and effectiveness measures across grade levels. At the elementary/junior high grades, non-traditional programs emerge as most likely to meet enrollment and racial composition goals. At the secondary level, no particular program type emerges. However, there is evidence that at this level academic programs have problems attracting minorities while at the same time overenrolling majorities.

4.4.2 Type of School Location

In addition to offering a variety of programs, magnet schools are located in different types of neighborhoods. For the 158 magnets for which data are available, we have identified four main types of locations:

- Majority neighborhood, which contains 25% of the schools;
- Minority neighborhood, which contains 42%;
- Mixed neighborhood, which contains 19%; and
- Neutral neighborhood, which is quite often a non-residential, business zone, and contains 14% of the schools.

As for program type, the concentration of location types varies by grade level. At the elementary/junior high level, only a very small proportion of magnets (7%) are located in neutral areas. At the secondary level, only 9% (or three schools) are located in majority areas. Thus, analysis of relationships between type of location and effectiveness measures are conducted by grade level.

At the elementary/junior high level, none of the three common locations--minority neighborhood, majority neighborhood, mixed neighborhood--emerges as most likely to meet enrollment and racial composition goals (see Table C-5, Appendix C). However, there do appear to be differences among the three in terms of their attractiveness to one race or the other. Most clearly, the minority location appears to be unattractive to majorities. This is not surprising. The reluctance of majority students to attend schools in minority neighborhoods has plagued desegregation efforts since their inception in 1954.

Recently, some have begun to posit a growing reluctance on the part of minorities to attend schools in majority neighborhoods. Considering that minorities have always borne the burden of desegregation in terms of loss of their neighborhood schools, such an attitude is quite understandable. Minorities may simply be growing weary of giving up their neighborhood schools in order to attend a desegregated school in a non-welcoming or even hostile majority community.

Our data on the pull of the majority neighborhood for minorities are frankly contradictory. When we look at overall minority subscription rate, we find a positive relationship with majority location. This suggests of course that minorities are indeed willing to attend, are perhaps even attracted to,

magnets in majority neighborhoods. However, when we break down the overall subscription rate into its components (i.e., ability to meet goals, tendency to underenroll, and tendency to overenroll), we get a different picture. Majority location then appears to be likely to either underenroll or overenroll minorities, but unlikely to meet minority enrollment goals.

Thus, we are left somewhat at a loss concerning the attractiveness of majority neighborhoods for minorities. On the one hand, we might conclude that the weight of the data indicates that majority locations are indeed acceptable, perhaps even desirable, to minority students. On the other hand, we might conclude that the contradictory relationships with underenrollment and overenrollment indicate that some unknown, confounding factor is at work. For example, it may be that majority neighborhoods are indeed unattractive to minorities, but that an attractive program can offset this to the point of stimulating enrollment. Or, it may be that transportation considerations intervene. Nearby majority neighborhoods may be quite acceptable, more distant ones quite unacceptable. At this stage of investigation, we are unable to arrive at a conclusion on this issue.

Finally, our data indicate that the mixed neighborhood may be an acceptable compromise at the elementary/junior high level. While this location type does not appear likely to meet racial composition goals, it does appear to be acceptable to both races, at least in terms of overall subscription rates. Thus, we might speculate that the mixed location is attractive to both races and that problems in meeting racial composition goals are due more to district failure to monitor for composition than to any aversion of either race for the mixed neighborhood location.

Turning to the secondary level, we see that mixed neighborhoods clearly appear to be most likely to meet enrollment goals for both races (see Table C-6, Appendix C). Further, neutral neighborhoods clearly appear to have problems in attracting majorities. However, we must exercise some caution in interpreting these patterns.

At the secondary level, we are dealing with only two program types--academic and vocational. Since neutral neighborhoods are often non-residential, business districts, it may be that the vocational program type is predominant in this location. Thus, what appears to be a majority aversion to neutral neighborhoods may in fact be majority disinterest in vocational programs. However, there is no reason to suspect that mixed neighborhood magnets are predominately one program type or another. Thus, we are probably

safe in concluding that, for the secondary as well as the lower grade levels, the mixed neighborhood is acceptable to both races.

In summary, while location is not as active a correlate as is program, there are interesting differences among location types in ability to attract students of one race or another. Principally, at the lower grade levels, minority locations appear to be clearly unattractive to majorities. And, for both grade levels, it appears that the mixed neighborhood location may be one acceptable to both races.

4.4.3 Type of Attendance Structure

It was somewhat of a surprise to us to discover in the course of our site visits that the magnet schools in our 18 districts had such variety of attendance patterns. For the 224 schools for which data are available, we were able to develop five basic types of attendance structures. These are:

- The citywide draw, which enrolls students on a district-wide basis, giving no preference to anyone on the basis of residence, and which is used by 44% of our schools.
- Limited geographic area draw, which enrolls only those students who reside in a clearly defined geographic area or attendance zone. The zone is structured to include both majorities and minorities and usually has been developed for the express purpose of achieving desegregation. Some 8% of our schools use this attendance structure.
- Local neighborhood plus citywide draw, which gives first priority to neighborhood children. Remaining seats (or perhaps a certain predesignated portion) are then opened to students throughout the district. This structure is used by 30% of the schools.
- Local neighborhood plus limited geographic area, which gives preference to neighborhood children and then enrolls students who reside in a clearly defined area. This structure is used by 7% of our schools.
- Citywide plus limited geographic area draw, which gives priority to children in a limited area and then enrolls students on a citywide basis. This structure is used by 12% of our schools.

The distribution of these attendance structures differs by grade level. At the elementary/junior high grades, we find all five types, although the citywide and local neighborhood plus citywide are by far predominant. At the secondary level, we find three types--citywide (by far predominant), citywide plus limited geographic area and local neighborhood plus citywide. Thus, our analyses are conducted separately for each grade level.

In spite of its predominance, the citywide attendance structure emerges at both grade levels as least likely to meet enrollment and racial composition goals (see Tables C-7 and C-8, Appendix C). At the elementary/junior high level, those structures that are grounded in the neighborhood (either neighborhood plus citywide or neighborhood plus limited geographic area) appear most likely to meet goals. At the secondary level, the citywide plus limited geographic area attendance structure emerges as the most promising alternative.

Given these patterns, we must conclude that the citywide attendance structure, while predominant at both grade levels, presents some clear problems in attracting students. This may be due primarily to transportation problems or it may be due to the lingering strength of the neighborhood school tradition. Regardless of this, our findings strongly suggest that the citywide attendance structure may not be the most effective in meeting enrollment and racial balance goals. Where possible, it may be best to ground the magnet in a more limited area that preserves at least some sense of the neighborhood school.

4.4.4 The Relative Importance of the Major Correlates

The results of our regression analyses are summarized in Tables 4.2 and 4.3. As we examine these tables, it quickly becomes apparent that the total amount of variance accounted for by the three major correlates is quite low for all of our effectiveness measures, particularly at the elementary level. There are two considerations which might account for this phenomenon. First, since this is an exploratory study, our measures are necessarily somewhat crude. Certainly, then, measurement error is a contributing factor in this study, as in any other.

However, we feel that district level contextual factors are of far greater importance in explaining the overall lack of power of our school correlates. In our analysis of magnet programs (presented in Chapter Three), such contextual factors accounted for a considerable part of the variance in program effectiveness. For example, if the majority community is resistant to desegregation and the district is operating under a voluntary plan, majorities may not enroll in magnets--no matter how good the program or attractive the location. Conversely, if the community is receptive, magnets may be quite successful in enrolling majorities.

Table 4.2

Rankings of Correlates as Predictors of Effectiveness, Elementary/Junior High Level

Correlate (and % of variance accounted for by all correlates)	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability Overenr Majorit
Type of Program	1[a]	2	1[a]	2[b]	1[b]	3	2	3	2
Attendance Structure	2	1[a]	3	1[b]	2[b]	2	1	1[b]	1
Type of Location	3	3	2	3	3	1	3	2[b]	3
Total Variance Accounted For	14%	13%	12%	10%	7%	7%	14%	15%	6%

[a]Accounts for a notably greater portion of variance than any other correlate.

[b]Accounts for virtually equal amounts of variance.

Table 4.3

Rankings of Correlates as Predictors of Effectiveness, Secondary Level

Correlate and % of variance accounted for by all correlates	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Abilit Overen Majori
Type of Program	3	3	1[a]	2	3[b]	2	2	1	2
Attendance Structure	2[b]	1[a]	3	1	1[a]	3	3	3	3
Type of Location	1[b]	2	2	3	2[b]	1	1	2	1[a]
Total Variance Accounted For	22%	38%	19%	39%	42%	42%	19%	13%	57

[a]Accounts for a notably greater portion of variance than any other correlate.

[b]Accounts for virtually equal amounts of variance.

As we examine the rankings of the correlates as predictors, it also becomes quickly apparent that there are major differences across grade levels in the general pattern of relative importance. At the elementary/junior high grades, attendance structure appears to be the most important correlate, followed closely by program. Location seems to be of much less importance than either of these. In contrast, at the secondary grades, location appears to be the most imporatnt correlate. Program is second in relative importance, followed closely by attendance structure.

Based on these patterns, we might draw some overall conclusions about conditions for success at the two grade levels. At the lower grades, the relative positions of attendance structure and location indicate that the pull of the neighborhood school is quite strong, regardless of the location of the magnet. The position of the program correlate suggests, however, that an attractive program can indeed offset the pull of the neighborhood school at the lower grades.

At the secondary level, the magnet location appears to outweigh all other factors, including the attraction of the neighborhood school. The position of the program correlate again suggests that an attractive program can counter the location consideration. However, location appears to be so powerful at this level that a particularly attractive program may be required.

These general conclusions can be refined considerably when we examine minority and majority enrollment separately. For both grade levels, the patterns of correlate importance suggests the existence of some real differences between majorities and minorities in response to magnets. First, it appears that for minorities, the attraction of the neighborhood school is indeed powerful, but this attraction can be countered relatively easily by an appealing magnet program. For majorities, however, it appears that to the pull of the neighborhood school is added strong concern over the location of the magnet school (location appears to be even <u>more</u> important than attendance structure to majorities at the secondary level). Thus, to attract majorities, magnets must have an attractive enough program to counter both the majority concern about the magnet location and the pull of the majority neighborhood school.

To summarize, our regression analyses indicate that both race and grade level must be taken into account in predicting magnet school effectiveness. At the lower grades magnet programs must be attractive enough to counter

the pull of the neighborhood school for both minorities and majorities. In addition, the magnet program must be powerful enough to counter additional majority concerns about magnet school location. At the upper grades, a basically similar situation prevails. But, at the secondary level, concerns about magnet location appear to be even more powerful for majorities.

4.5 Other School Variables Explored as Potential Correlates

Two school variables of interest failed to emerge as active correlates during the course of our analysis. These were:

- Uniqueness of magnets in relation to both non-magnets and magnets; and
- The "newness" of the magnet's identity as a special school.

Since these variables reflect, in at least a gross manner, some important issues surrounding magnet schools, the fact that they proved inactive as correlates merits discussion.

The uniqueness of magnet schools has been of special concern to the ESAA Magnet Schools Program. Indeed, ESAA regulations require that magnets be unique in order to qualify for funding. Yet, our analysis indicates that uniqueness--whether in relation to non-magnets or magnets--is not a correlate of effectiveness (see Tables C-9 and C-10, Appendix C).

Further, a sizable portion of the magnets in our 18 districts are not unique from one or the other perspective. Of the 189 magnets for which data on uniqueness in comparison with non-magnets are available, 54% are deemed unique.* Interestingly, there are notable grade level differences in uniqueness in comparison with non-magnets. At the elementary/junior high levels, 47% of the magnets are defined as unique. In comparison, at the secondary level, 82% are considered unique in comparison with non-magnets. Of the 214 magnets for which data on uniqueness in comparison with other magnets are available, only 49% are rated as unique. Again, grade level differences obtain. At the lower grades, 39% are unique in comparison with other magnets; at the secondary level, 88%.

By the "newness" of magnet identity we do not mean recency of implementation. "Newness" refers instead to a school that was either newly established as a magnet or underwent major, clearly identifiable restructuring (e.g., staff retraining in a new curricula) in order to become a magnet. In contrast, a school may have had a special program of some sort (e.g., honors) in operation for a number of years. Such a school, because of its well-established identity, may be able to readily redefine itself as a magnet without making major changes in curricula or staff.

---

* Another 39% were considered by district personnel to be distinguishable or different from non-magnets in some important way, e.g., more individualization of instruction, but, for purposes of our analyses, were not defined as unique.

This construct of "newness" touches upon the basic questions of how magnet identity is established. Many critics of magnet schools have expressed fears that districts would merely label an existing school a magnet and make little or no effort to develop a special program. Perhaps in over-reaction, these critics have been extremely suspicious of any magnet that is neither newly established nor completely transformed prior to its being labeled magnet. On the other side of the fence are those who argue that it takes a certain amount of time for a special identity to be established in the eyes of the community. Hence, it is the school with an already established identity which should become a magnet.

Our analyses indicate that, at the elementary/junior high level, it does not matter whether a program is newly developed or already established at the time it is designated a magnet (see Tables C-9 and C-10, Appendix C). In other words, neither "newness" nor prior establishment are correlates of effectiveness at the lower grades. However, at the secondary level, we see a somewhat different pattern. Specifically, the prior establishment of program appears to have some positive relation to effectiveness (although not enough to warrant classification as a major correlate). When we consider that the great majority of the secondary magnets are either special academic focus or vocational programs, this is not unreasonable. It may be that the attractiveness of such program is enhanced as a solid identity is established.

In sum, we find that uniqueness does not appear to be a factor in magnet school effectiveness at either lower or upper grade levels. Further, at the lower grades it does not appear to matter whether or not a magnet is newly developed or has an established identity when it becomes a magnet. However, at the secondary level, there is some indication that an established identity may be a plus in attracting students of both races.

4.6 Summary and Conclusions

To summarize, our analyses of magnet school effectiveness and its correlates lead us to several conclusions. First, by and large, magnet schools are effective in meeting racial composition and enrollment goals at both elementary/junior high and secondary levels. Second, magnetic appeal has several elements, which vary to some degree in importance across grade levels. However, three elements--the program, the voluntary nature of magnets, and their "another chance" aspect (i.e., the opportunity magnets offer to children having behavioral or academic problems)--are of primary importance at both the lower and upper grades.

Third, of the several school variables explored as potential correlates of magnet school effectiveness, three proved to be of major importance. These are:

- Type of program,
- Type of school location, and
- Type of attendance structure.

For the elementary/junior high grades, non-traditional programs appear to be most likely to meet enrollment and racial composition goals. At the secondary level, no particular program type proved most important in terms of effectiveness. However, there is evidence that secondary academic programs have problems attracting minorities, while at the same time overenrolling majorities.

While location did not prove to be as active a correlate as program, it is clear that there are differences among location types in implications for effectiveness. Principally, at the lower grade levels minority locations are clearly unattractive to majorities. And, for both lower and upper grades, it appears that mixed neighborhood location may be acceptable to both races.

Attendance structure, which taps the issue of the loss of the neighborhood school, proved to be a surprisingly strong correlate. The citywide attendance structure, which is predominant at both grade levels, emerged as the type least likely to meet enrollment and racial composition goals. It appears to be unpopular with both minorities and majorities. Further, it is clear that at the elementary/junior high level, those attendance structures that are grounded in the neighborhood are the most attractive. At the secondary level, the citywide plus limited geographic area structure emerged as the most promising alternative. Thus, it appears that for both grade levels,

the pull of the neighborhood school is quite powerful. Where magnet attendance structure can capitalize on this attraction, effectiveness is likely to be enhanced.

The total amount of variance in effectiveness accounted for by program, location and attendance structure is quite low. This is due, we believe, to the greater impact of district contextual factors on individual school success. Further, relative importance of these three major correlates varies notably with race. The patterns of correlate importance indicate that, in general, magnet programs must be attractive enough to counter the pull of the neighborhood school for both minorities and majorities. In addition, magnets must overcome powerful majority concerns about magnet neighborhood locations (particularly at the secondary level).

Finally, our analyses indicate that neither the uniqueness of the magnet school nor the "newness" of its identity as a special school are important correlates of effectiveness.

CHAPTER FIVE

AN ANALYSIS OF THE ESAA MAGNET SCHOOL PROGRAM

5.0 Introduction

The purposes of this chapter are to examine the ESAA Magnet School Program awards process and to compare ESAA funded and non-ESAA funded magnet schools. The awards process used to grant funding for magnet school programs is a translation of the enabling legislation for magnet schools and reflects the contents of the regulations developed from that legislation. The awards process includes statistical and quality of proposal criteria and the objectives which these criteria reflect. The examination of these factors allows us to point out ways in which the process and, consequently, the program may be improved. Further, a comparison between the elements of the ESAA awards criteria and this study's findings concerning magnet school effectiveness suggests additional changes in the awards process. Finally, the comparison of ESAA funded and non-ESAA funded programs will reveal any significant differences which may assist in understanding reasons for success or non-success of magnet schools in helping to achieve school desegregation. In preparation for our discussion, we briefly review the ESAA Magnet School Program enabling legislation and the procedures for awards as established in the regulations.

5.1 The ESAA Magnet School Program

5.1.1 The Enabling Legislation and Regulations

The Congress enacted amendments to the Emergency School Aid Act in 1976 authorizing the funding of magnet schools. The Magnet School Program was to be an attempt to provide support for increased emphasis upon the voluntary aspects of desegregation, which in turn would help to alleviate and reduce crisis situations. The Emergency School Aid Act (as amended) states that:

> (b) The purpose of this title is to provide financial assistance
>
> (1) To meet the special needs incident to the elimination of minority group segregation and discrimination among students and faculty in elementary and secondary schools

(2) To encourage the voluntary elimination, reduction or prevention of minority group isolation in elementary and secondary schools with substantial proportions of minority group students; and

(3) To aid school children in overcoming the educational disadvantages of minority group isolation. *

Further, in the specifications for fulfilling the above statement of purposes, ESAA also states as one component of eligibility for assistance that a grant or contract is authorized to be made with a local educational agency:

> (B) which, without having been required to do so, has adopted and is implementing, or will if assistance is made available to it under this title, adopt and implement, a plan for the complete elimination of minority group isolation in all the minority group isolated schools of such agency; or
>
> (C) which has adopted and is implementing, or will, if assistance is made available to it under this Act, adopt and implement, a plan--
>
> > (i) to eliminate or reduce minority group isolation in one or more of the minority group isolated schools of such agency,
> >
> > (ii) to reduce the total number of minority group children who are in minority group isolated schools of such agency, or
> >
> > (iii) to prevent minority group isolation reasonably likely to occur (in the absence of assistance under this title) in any school in such district in which school at least 20 per centum but not more than 50 per centum, of the enrollment consists of such children.

The Rules and Regulations**developed to govern the award of fiscal year 1977 grants for magnet schools state that funds awarded may be used for those activities designed to carry out the purposes "relating, generally, to the elimination of minority group segregation, discrimination and isolation and the effects thereof."*** The regulations also state that the objective criteria for use in evaluating applications for grants relating to magnet schools are "designed to measure the net change in minority group isolation in the applicant's schools over two years--the project year minus the school year of two years ago, and the project year minus the school year immediately preceding." The elimination, reduction, or prevention of isolation in the

---

*Deleted in the Educational Amendments of 1978.

**Federal Register, Vol. 42, No. 127, Friday, July 1, 1977.

***Ibid., p. 33876.

latter period has twice the weight of that in the former. Thus, the criteria emphasize the efficacy and comprehensiveness of the applicant's efforts to address minority group isolation, and the need arising from those efforts.*

The comparison of purposes of the Emergency School Aid Act and the translation of these purposes through the regulations, suggests some areas of possible unclarity or contradictions. This is not to suggest that the regulations misrepresent the requirements of the Act; rather, it is to suggest that the regulations do not reflect the varied requirements of the Act. In particular, and this discussion is of importance in understanding the problems of assessing the Magnet School Program, the Act states that a local education agency (LEA) is eligible if it has a plan which deals with minority isolation in one school or in the entire district. One objective criterion as specified by the regulations relates to the efforts of the LEA to affect the entire district. It should be noted that one purpose of the objective criteria in the regulations is to ensure that ESAA funds are being given to "newly desegregating districts". But, as quoted above, the regulations also stress the "comprehensiveness of the applicant's efforts to address minority group isolation". In terms, therefore, of assessing the Magnet School Program, the Act would seem to indicate that some activity affecting less than the total district is acceptable. Indeed, if the effect of magnet schools were measured by total district reduction or elimination of minority student isolation, the measurement would necessarily have to include non-magnet desegregation efforts. Conversations with Magnet School Program officials have clarified their position that the outcome of a funded Magnet School Program should be district-wide desegregation.

5.1.2 The ESAA Magnet Schools Awards Process

Applications for funding under the ESAA Magnet School Program are evaluated through both objective and educational criteria. The objective (statistical) criteria measure the net change in minority group isolation in the district schools. Generally, the isolation score for the period "the project year minus the school year of two years ago" provides one score; "the project year minus the school year immediately preceding" provides the second score. This ensures that the most recent desegregation activity of a district

*Ibid., p. 33875.

is given more importance in the awards decision. These scores are computed by ESAA Magnet School Program staff and are assigned points for net change.

The educational criteria are composed of seven major sections with a number of subsections. These criteria and their relative importance are:

A. Needs Assessment (total = 10 points)

1. Magnitude of need (5 points)
2. Support of need by objective evidence (5 points)

B. Statement of Objectives (total = 10 points)

1. Statement of measureable objectives (4 points)
2. Extent objectives address the needs (3 points)
3. Extent objectives developed by persons with relevant experience from all racial groups (3 points)

C. Activities (total = 36 points)

1. Project Design (24 points)

   a. Uniqueness of proposed activities (4 points)
   b. Thoroughness and coordination of planning (4 points)
   c. Extent activities promote interracial and intercultural understanding (3 points)
   d. Extent activities meet needs of individual students (4 points)
   e. Extent activities reflect interest of community (3 points)
   f. Extent curriculum includes materials pertinent to racial and ethnic student composition (2 points)
   g. Extent activities relate to instruction in basic skills (2 points)
   h. Extent of cooperative planning among teachers for individual students (2 points)

2. Staffing (6 points)

   a. Extent of adequate staffing plan (2 points)
   b. Staff should reflect racial and ethnic composition of school (2 points)
   c. Extent of plans for necessary staff training (2 points)

3. Parent and Community Involvement (6 points)

   a. Extent of involving parents and students in activities (2 points)
   b. Extent of involving public and private agencies previously involved in elimination of minority group isolation (2 points)
   c. Extent of planned involvement of advisory committee (2 points)

D. Management (total = 8 points)

1. Extent funds requested are of sufficient magnitude for the proposed program (2 points)
2. Extent of minimal requests for funds for equipment (2 points)

3. Detailed and realistic schedule of implementation (2 points)
4. Plan for meeting logistical requirements for proposed activities (2 points)

E. Evaluation (total = 6 points)

1. Adequate timetable for compilation of data for the evaluation (2 points)
2. Instruments used for evaluation (2 points)
3. Comparison of evaluation results with norms, control group performance or other external standards (2 points)

Three readers each rate the applications on these criteria and assign points to each of the criteria areas. The points are summed and the average score given to the application. The sum of the points assisgned through the objective and educational criteria provide the basis for ranking the applications in order of funding priority. At this point it should be noted that the regulations allow at least five grants to be made where a sufficient number of "meritorious applications" have been submitted. The regulations state that this provision "is to ensure that the needs of applicants are met to some extent, and to provide a basis for evaluating the program in its initial phase."* It is not clear from the regulations whether this provision ensures the award of at least five grants no matter what the quality of the composite scores or whether this allows the program to award five additional grants to those applications outside of the prioritized range of candidates. If the former conclusion is correct, then the regulations contain an implicit assumption of a quality threshold which applications must meet in order to be funded. This question is of critical importance in assessing the awards made for the academic year 1977-78.

In contrast to the general ESAA awards in which funds are channeled through the states to the Local Education Agency, grants are applied for by Local Education Agencies and funds are awarded directly to them. The regulations provide for the following (selected) requirements for magnet schools:

1. The enrollment of the school must meet the following requirements:
   a. Minority group students constitute no less than 20 percent and no more than 50 percent of the enrollment.
   b. The ratios of the number of students from each minority group to the total number of minority group students enrolled in the magnet school generally reflect the ratio among minority group students enrolled in all schools of the recipient; and
   c. No student has been compelled to enroll in the magnet school or to enroll in another school after enrolling in the magnet school.

*Ibid., p. 33875.

Determination of compliance with these requirements will be assessed on the 60th day after the beginning of the first school term during the project period.

5.2 Assessment of the Awards Procedures for Academic Year 1977-1978

A total of 42 applications for magnet school funding were received; a total of 12 grants were awarded. Ten awards were made to the first ten highest ranking applications. The two other awards were made to those applications which ranked 19th and 25th. Table 5.1 presents the isolation, quality and composite scores for the funded applications. A number of non-selected applications were rated better (in some cases by 10-11 points) on the quality of their proposals. Also, a number of non-selected school districts showed a greated decrease in minority group isolation (the statistical score) than some of the selected districts. Since the relative weightings for the composite index are 56 and 44 percent for the statistical and quality scores, respectively, but the importance of the proposal becomes critical in achieving funding. This can be further clarified by reference to Table 5.1. One application had no statistical information at all (District H), two had zero statistical points, and three had very few points (1, 2 and 6). Of the 12 awards, 50 percent had extremely low scores, which indicates a low degree of improvement in the isolation of minority children in the districts. The quality of the proposal, therefore, was the justification of the award.

A closer look at the isolation scores provides information not only about the effectiveness of the criteria but also about some potential problems in the award process. It was pointed out earlier that the statistical (objective) criteria were to ensure that newly desegregating school districts would receive the magnet funds. The regulations also stress the "efficacy and comprehensiveness" of the effort to address minority group isolation. Awards were made to districts which, through their own submitted statistics, were <u>increasing</u> isolation in the project year rather than decreasing isolation. One award was made to a district in which there had been, according to the ESAA criteria, no minority isolation (District J). Two awards were made to districts in which less than 10 percent of the minority children were in isolated schools (Districts F and L). In one of these sites the award was made to assist in planning for a magnet school program (which was to be an addition to their already operating magnet

Table 5.1

Isolation,* Quality and Composite Scores

for Funded ESAA Programs

District	Isolation Base Year I	Isolation Base Year II	Isolation Project Year	Score I	Score II	Total Statistical Score	Quality Score	Composite Score
A	53.5	62.6	80.2	9	12	21	65	86
B	72.9	81.3	96.0	8	10	18	68	86
C	33.7	54.6	66.0	11	10	21	$55\frac{5}{6}$	$76\frac{5}{6}$
D	92.8	84.2	97.5	2	10	12	$60\frac{2}{3}$	$72\frac{2}{3}$
E	39.0	45.2	58.9	6	10	16	$53\frac{1}{3}$	$69\frac{1}{3}$
F	96.3	99.6	99.0	1	0	1	$67\frac{2}{3}$	$68\frac{2}{3}$
G	66.2	75.7	65.1	0	0	0	67	67
H							$66\frac{1}{3}$	$66\frac{1}{3}$
I	29.6	78.0	76.9	15	0	15	$50\frac{2}{3}$	$65\frac{2}{3}$
J	100.0	100.0	100.0	0	0	0	62	62
K	15.9	15.5	15.6	0	2	2	57	59
L	93.3	93.2	98.1	2	4	6	$51\frac{2}{3}$	$57\frac{2}{3}$

*The ESAA Isolation score approximately reflects the proportion of pupils who are not in minority isolated schools. Thus, the higher the score the greater the proportion of children attending non-minority isolated schools.

program) which was projected to serve one percent of the minority children who were in isolated schools.

This detailed look at the awards process and the criteria is not meant only as a criticism of the process; there were a number of circumstances (late funding of the program, plus more funding than was originally planned) which made the awards process difficult. In addition, it was the first year of implementation for the program. The more important purpose is to illuminate problems which may exist in the expressed objectives of the program and the implementation of the process through which the objectives are to be reached. The following sections, therefore, present some of those problems which we feel may exist.

5.3 The Criteria and the Objectives of the Program

Underlying the awards process and, indeed, any evaluation of the ESAA Magnet School Program, is the question of the objectives of the legislation. The legislation and the regulations include an array of possible objectives.

1. Magnet programs as a device to reduce the degree of isolation of minority students in the district as a whole.
2. Magnet programs may be used as a device to reduce minority student isolation in particular schools or segments of the school system.
3. Magnet programs may be educational centers, that is, not as a school for the full day, full year attendance of students, but as part time (e.g. one afternoon a week) educational involvement.
4. Magnet schools may be used in any of the above ways to reduce resegregation; that is, a school district which had desegregated finds that the school district, part of the district or a particular school(s) is becoming more minority group isolated.

The regulations, therefore, establish guidelines for a program which may or may not affect district wide desegregation. The statistical criteria, however, are used in a manner which emphasizes the "comprehensiveness" or district wide effects of the program efforts. From the previous analysis of the awards process, it is clear that the recency of desegregation and its comprehensiveness and the fact that the program should be associated with the reduction of minority group isolation are not reflected in the use of the statistical criteria. It is reasonable to expect, given the diverse objectives of the ESAA program, that the applications funded in AY77-78 could be represented by at least one of the objectives set forth above. However, nowhere in the available documentation was there a statement of the objectives anticipated to be met by the proposed projects. Further, our review of the funded proposals did not reveal evidence that the proposals expressed clearly the desegregation purposes in terms of the above objectives. We also could not find, in a review of the review panel documents, any distinctions which were made on the basis of the different objectives. Rather, the panelists appeared to be making judgments based upon the educational program and the general desegregation need in the proposed project.

The non-specification of the varied objectives in the awards process leads, therefore, to confusion for the "outsider" looking at this process

and, potentially, creates a series of difficult problems for the management of the ESAA program.

5.3.1 Statistical Criteria and Program Objectives

The statistical criteria are designed to contribute about 56 percent of the overall score and to reflect new desegregation in the district. However, awards have been made to districts in which during the project year, when minority group isolation is supposed to be decreased with the assistance of federal funds, the isolation is increased. Awards have been made also to districts which have little or no minority group isolation. At least one award was made to a district which showed virtually no change in the distribution of its minority children either in the project year or in the prior two years. This hardly indicates a movement toward desegregation, an activity clearly specified in the regulations. The evidence from the first year of use of the statistical criteria for this program would indicate a discontinuity between objectives and implementation. If such a situation were to continue these criteria would effectively be seen as meaningless and program management open to funding any proposed project which claimed to be desegregation oriented as long as it could phrase the activities within the framework of a magnet school program. ESAA magnet program staff would then be open to attacks of personal or political favoritism.

The lack of implementation of the statistical criteria in a uniform manner has other consequences for school districts. While the objectives for the program are set out in the regulations, some of the objectives are obscure. Namely, the use of magnet schools to assist in avoiding resegregation was not seen as a possibility by some of the school districts visited on this study. School district officials claimed that they were discouraged from applying because the district had desegregated some time ago and felt they could not qualify for these funds. Abt Associates project staff attended a regional briefing held to inform school district personnel of the application process. In that briefing no mention was made of the different objectives which could be funded through the ESAA Magnet School Program. The regulations as a consequence are oriented to discourage school districts in

the sound and other districts which may have already desegregated. However, the manner in which the statistical criteria were actually implemented indicate this is an artificial and erroneous discouragement.

5.3.2 Educational Criteria and Program Objectives

The educational criteria, which were designed to constitute 44 percent of the composite score, take on added importance in light of the way in which the statistical criteria have been used. Educational criteria in operation have constituted between 73 and 100 percent of the composite score. As noted earlier, the scores in educational quality allowed districts with little desegergation movement to place high in the prioritized ranking of districts. It therefore becomes of great importance to examine the educational criteria in relation to program objectives.

Proposals receive 20 of 70 points for needs of the district and the objectives of the proposed program. Within the statement of need and the statement of objectives are contained the desegregation purposes of the project. Again, we face the same problem mentioned with the statistical criteria, the problem of the objectives of the proposed program and their correspondence with federal program objectives. There are no evident guidelines though which this can be assessed; there is no evidence of the basis upon which reviewers make their decisions. In reading the applications, we found that the purposes for the magnet school programs are varied, ranging from a need to provide a "voluntary experience in desegregation" to a need to desegregate certain schools or certain grade levels. In many there is no experssion of the desire to impact on district-wide desegregation.

On our site visits, some officials told us that writing a "good" proposal was key to their success. It also became clear that the writing of a good proposal was often automatic; that is, as one official remarked, "We can write a good proposal on anything." While we do not wish to impugn the motives of this, or any other district, it is realistic to expect that a given source of funding will draw respondents whose needs and objectives are not as well defined as their ability to discuss them.

Among the educational criteria there are a number of factors which do not appear to have a significant relationship to magnet school operations nor to the manner in which the current awards process actually operates. Specifically, we refer to the following criteria:

Statement of Objectives

(2) The extent to which the objectives realistically address the needs assessed (3 points)

Comment: This criterion appears to be redundant with other criteria under the statement of objectives.

Activities:

(1) Project Design

(i) The extent to which the proposed activities are unique (4 points)

Comment: Our study has shown that the image of excellence of a school is more important than uniqueness in defining a magnet school.

(ii) The extent to which the proposed activities will meet the needs of individual students, including students of varying levels of achievement (4 points)

Comment: There is no indication from the current awards process that this is a matter of concern nor that it can even be assessed through the proposal.

(viii) The extent to which the proposed activities provide for cooperative planning among teachers and other staff to meet the needs of individual students (2 points)

Comment: Again, this activity does not appear in the current awards process to be a significant item of concern nor capable of being realistically assessed through a proposal.

(2) Staffing

(iii) The extent to which the proposed activities include necessary staff training. (2 points)

Comment: This is too general to be of use in conducting an adequate evaluation of a magnet school proposal. The "necessary staff training" should be specified for a particular area of concern. We recommend that staff training in the area of ethnic and intercultural relations be specified.

At a minimum, we believe that these factors contribute less to an understanding of a district's magnet school proposal. Our recommendation is to replace these factors with more relevant dimensions, as will be discussed in Chapter Six.

5.4 Other Considerations of Program Objectives and Awards Criteria

An extensive analysis of the administration of the ESAA awards process was reported by the Comptroller General of the United States in "Better Criteria Needed for Awarding Grants for School Desegregation."* In this report, the General Accounting Office (GAO) cited deficiencies in the ESAA program operations including the lessened emphasis upon desegregation related needs, differences between the Act and Office of Education criteria and the conclusion that funds may not be targeted to the most needy school districts. We will not review this document in this report, except to state that many of its criticisms of the general awards process parallel those for the magnet program, in particular. However, a number of concerns for the awards process of the magnet program need to be expressed.

5.4.1 Awards Criteria and Magnet "Educational Centers"

The regulations specify that "educational centers"--that is, within school programs which draw students usually for a part of the school day or for a few days during the school week--are eligible for ESAA funding. To the extent that these centers attract racially different students from outside the school, the school is considered to constitute a "racially desegregated" eligible program. However, nowhere in the awards criteria is there a consideration of the educational center and its particular needs or objectives in the desegregation process. In our site visits we visited schools with such educational centers. Our observations lead us to the conclusions that such centers are not really assisting in the process of desegregation as was the intent of the Act. The major contribution to "desegregation" in the district is to provide a numbers count of interracial contacts. These contacts, however, may be for an hour or two per week, where the interaction is peripheral at best. Such activities and the lack of guidelines for their development and use as desegregation techniques lead us to the conclusion that they do not meet the intent or the objectives of the ESAA program.

---

*General Accounting Office, January 20, 1978.

5.4.2 Magnet Schools and Other Desegregation Efforts

The awarding of statistical points in the awards process is based upon the calculation of the changes in the numbers of minority students in isolated schools. In the application of the statistical criteria there is no distinction made between the desegregation which results from magnet schools, and that which results from other desegregation techniques, nor indeed is there a distinction made in racial composition caused by exogenous factors, such as a change in migratory patterns. Therefore, when the effectiveness of magnets is assessed in terms of district level desegregation, there is no real way to separate out the impact of magnets from the impact of other factors. Or to put it another way, what happens at the district level (either negatively or positively) maybe attributed to magnet schools without a valid reason.

The inability of the statistical awards process to distinguish the various reasons for changes in the racial composition of the school district population, means also that the comprehensiveness of the districts desegregation plan cannot be explicitly determined. Comprehensiveness is operationally defined under the current awards process by size of change in desegregation results, while size of change and comprehensiveness of plan may be related, they are not equatable. Therefore, the application of the statistical criteria does not unambiguously address the question of the "comprehensiveness" of a district desegregation program. In turn, the assessment of the effectiveness of magnet schools through changes in district wide desegregation does not unambiguously assess the contribution to magnet schools to desegregation since there are so many other activities which are also affecting desegregation, both positively and negatively.

It is important, consequently, to place the magnet effort within the context of the entire desegregation activity. However, this can only be done by having each applicant specify the precise objectives of the magnet program and by assessing the desegregation activities outside of the magnet effort. For example, changes in isolation should be assessed in Buffalo for the non-elementary grades and, perhaps, for the non-magnet

elementary schools. This suggestion highlights the need for a specification of the objectives of the plan in relationship to ESAA regulations and the need to utilize the awards criteria in a selective fashion.

5.4.3 Magnet Effectiveness and ESAA Awards Criteria

In Chapters Three and Four we presented the results of the relation between magnet school processes and structures and effectiveness in desegregation. In these analyses it was found that districts which had a voluntary, comprehensive desegregation plan, a low proportion of minorities in the school district, and which used magnets as one component of their desegregation techniques were most effective. It was also found that magnet schools were more effective when certain curricula were offered, when the attendance area served was circumscribed rather than citywide and when the school was located in a mixed racial area. The factors affecting effectiveness were differentially important for majority and minority students and for elementary and secondary grade levels.

It is quite evident from the above that magnet programs supported in (1) districts which have had a history of positive desegregation activity, and (2) districts in which desegregation (at least structurally) would be easiest, would have the greatest chance of success. However, this would not meet the purpose of ESAA nor of the federal government's intention to aid in desegregation efforts in the more difficult districts. There is little in our data that would be of assistance in specifying the regulations or awards criteria which would enhance success in these more difficult districts. It is possible to suggest that in such districts magnet schools must be a definite part of a series of desegregation techniques, probably techniques which specify a mandatory desegregation plan. The alternative would be, as in Milwaukee, to have an extensive magnet program. The experiment in Milwaukee, however, is not far enough along as yet to make a determination as to its success.

In general, the factors affecting magnet school success may enhance effectiveness in any district. These factors provide a basis for activities which the awards procedures should emphasize. First, the awards criteria should require specification of the location of the school and the steps that the district will take to ensure the success of drawing the racial groups to the school. Second, the attendance area served by each school should be specified; citywide zones should be discouraged, particularly on the elementary school level, unless explicitly justified and a plan of action set forth to ensure the appropriate draw of the racial groups. This last requirement would be most appropriate for larger districts. These two suggestions also stress the importance of establishing the specific objectives for the magnet program instead of allowing the general rubric of "district-wide" desegregation to approximate the purpose. Such specification would assist in more complete planning by the district and enable the ESAA program to more completely understand and assess the district's application.

5.5 A Paradigm for ESAA Planning

We can depict the varied objectives set forth in the regulations in the following figure which displays the two primary dimensions which (our analysis indicates) are most important in the regulations. One dimension specifies the extent of the desegregation plan; i.e., the plan initiates a serious attack on desegregation; the plan is aimed at improving or maintaining the desegregation attained; and finally, the plan is designed to prevent resegregation within the school district. The other dimension reflects the extent of the coverage within a district of the desegregation plan; i.e., either the plan is designed for the entire district (including all grade levels), or it deals with only a part of the district--a neighborhood, a set of schools, or a particular school--which the district wishes to desegregate.

Desegregation Plan	Desegregation Phase: Newly Desegregating	Maintaining or Improving	Prevention of Resegregation
Comprehensive	1 High	3 Medium	5 Low
Partial	2 High	4 High	6 High

This figure provides a paradigm through which we may examine the purposes and operations of the ESAA Magnet School Program. In addition, it can help organize ESAA's approach to the awarding of funds.

Cell 1 in the figure represents a newly desegregating school district which has a comprehensive desegregation plan, i.e., a plan which covers the entire district and which covers all the grade levels in which desegregation is required. These are the factors which are specifically mentioned in the regulations as the major priorities of the ESAA Magnet School Program.

Cell 2 represents those newly desegregating school districts which have a desegregation plan covering only a part of the entire district or only some of the grade levels requiring desegregation activities. In this instance, the ESAA regulations are not met; the desegregation plan is not a comprehensive plan but a partial plan.

Cells 3 and 4 represent school districts which could be characterized as being in a later stage of desegregation activity; here the need is to maintain or improve upon the desegregation objectives already attained. The coverage of the desegregation plan could, of course, be either the entire district or a part of the district. While both cell types are provided for in the regulations, they are clearly not the main priorities of the ESAA program.

Cells 5 and 6 characterize school districts in the later stages of desegregation, where original objectives have been achieved but where re-segregation is becoming an evident threat. This stage of desegregation is not an obvious priority of the ESAA program although we believe that the regulations provide eligibility for such situations.

There are some problems with this paradigm; for instance, where does a newly desegregating district end and a district attempting to maintain its achieved desegregation begin? However, the paradigm does provide a basis for classifying all desegregating districts and for characterizing the desegregating environments within which magnet schools may be employed. The paradigm's treatment of desegregation as a process is particularly helpful for classifying districts which have already used magnet schools for de-segregating but are now reapplying for ESAA support.

Magnet schools can be a useful desegregation technique in all six situations depicted in the above paradigm. However, the use of magnet schools is not likely to be equally successful in all of the situations. In cells 3 and 5 we expect that the utility of magnet schools would be less. Since in these cells desegregation has been attempted, we expect that there would be less need for comprehensive desegregation activity; rather the need would be to employ magnets to relieve segregation in specified areas or schools. There will be obvious exceptions to this classification since each district will have its own set of problems and circumstances and each district in turn will present its own solution.

The above discussion represents both a statement of the various objectives set forth in the regulations and a statement of some of the more important ways in which magnet schools could be used to assist in desegregation activities in school districts. Our site visits have provided examples of most of these situations in which magnet schools are used. While we have an appreciation for how magnet schools could be useful in a variety of situations, we must also be responsive to the content of the legislation and regulations of the ESAA Magnet School Program.

If we adhere closely to the stated aims of the ESAA Magnet Program, we can reduce the 3 x 2 matrix paradigm above to a simple 2 x 2 paradigm. The priorities established in the regulations stress the newness of the district desegregation effort. Thus, the categories of maintenance and prevention can be collapsed into a broader category indicating desegregation efforts which are not new.

Desegregation Plan	Desegregation Phase: New Desegregation	Desegregation Phase: Later Desegregation (Maintain/Prevent)
Comprehensive	Highest ESAA Priority	
Partial		

However, the measurement of these priorities is more implicit than explicit. They are measured indirectly through the application of the statistical criteria. We believe that the program and its potential applicants would be served better by making these priorities, and their measurement, as explicit as is feasible.

Therefore, we suggest that the ESAA magnet program should require that applicants describe and present evidence that would substantiate their placement into one of these categories of funding priority. Then, the statistical criteria could be applied to distinguish between the applicants within each funding category.

A logical extension of this approach to have proportions of the available ESAA magnet program funds attached to each priority category. For example, 60 percent of available funds could be dedicated to support of districts with new desegregation and comprehensive plans; 30 percent to newly desegregating districts with partial plans; and 10 percent to districts in late stages of desegregation. While the

exact disposition of funds must be decided by the federal government, such a procedure would greatly clarify program decisions and purpose and provide much needed guidance to school districts.

According to this paradigm, highest priority would be given to newly disegregating districts, and within these districts highest priority would be given to those districts with comprehensive desegregation plans. Second priority would be given to those newly desegregating districts which have a partial plan. As we interpret the priorities of the Act and the regulations, districts which are in the stage of later desegregation activities would be given lesser priority for funding, or completely excluded from the competition for funds. It should be noted that these are the priorities which have been implemented through the ESAA magnet program awards criteria.

5.6 Differences Between ESAA Funded and Non-ESAA Funded Programs

The purpose of this section is to examine the characteristics of those magnet schools funded by ESAA compared to the magnet schools not funded through ESAA. We examine these differences by grade level since our previous analysis has indicated that there are divergent factors affecting elementary and secondary schools.

However, before proceeding to these separate analyses, we present, in Table 5.2, the distribution of minority enrollment patterns for ESAA and non-ESAA funded districts. The reader is specifically cautioned that these enrollment figures were obtained from the districts generally before the midpoint of the 1977-78 academic year, and before the 60 day limit imposed by the ESAA for reaching their racial composition goals. It is expected, therefore, that many of these schools (particularly ESAA schools) had changed their compositions since these data were collected. The ESAA program office has taken action, later in AY '77-'78, to remove ESAA support from at least 13 schools which were not in compliance with the 20-50 percent minority enrollment guidelines.

Keeping these conditions in mind, it is interesting to note that there is some difficulty experienced by the ESAA funded schools in reaching their racial composition goals. The non-ESAA sites have distributions of enrollment which show a greater dispersion around the 20-50 percent guidelines. But, this is to be expected since their enrollment goals may vary widely depending upon the particular criteria applied in their unique situations.* It is obvious, however, that a meaningful proportion of the magnet schools are either impacted with minority students (60 to 100 percent) or relative havens for majority students (0 to 20 percent). Although we have found great enthusiasm for magnet schools in the districts we visited, these figures describe the difficulty some schools have had in attracting the desired proportions of majority and minority students.

ESAA funded schools are more effective than other magnet schools in reaching their minority and majority students enrollment goals. Thus, these

---

*This factor was discussed in Section 4.2. As noted there, magnet schools are in general quite successful at meeting their particular enrollment goals.

Table 5.2

ESAA - Non-ESAA Minority Enrollment

Percent Minority	Total Schools	ESAA No. of Schools	ESAA Percent	Non-ESAA No. of Schools	Non-ESAA Percent
0-10	1	-	-	1	.67
11-20	16	4	1.3	12	8.11
21-30	17	6	7.6	11	7.43
31-40	29	13	16.5	16	10.81
41-50	38	18	22.8	20	13.51
51-60	41	16	20.3	25	16.89
61-70	27	8	10.1	19	12.84
71-80	20	7	8.9	13	8.78
81-90	13	2	2.5	11	7.43
91-100	14	5	6.3	9	6.08
Missing	11	-	-	11	7.43
Total	227	79		148	

schools are more balanced racially in terms of their goals than are non-ESAA magnet schools. In assessing this finding, however, it should be kept in mind that often the ESAA schools have much greater leeway in reaching their goals than do other districts. For example, the requirement for the enrollment of minority students in ESAA schools is for 20-50% minority students; for other sites, the requirement may be for a more rigid enrollment pattern, i.e., the district average plus or minus 10%. However, the ESAA schools do exhibit a better ability to enroll the proportions of minorities and majorities for which they had planned.

Not surprisingly, ESAA funded programs are newer programs. They tend to have proportionately more schools which are labeled as magnets, and they are much more likely to have more than one curricular program type represented in the district. However, this latter result could be related to the size of a couple of school districts which receive ESAA funds and have large magnet programs (i.e., Boston and Milwaukee).

In terms of program types, ESAA funded schools compare to the non-ESAA funded schools in the following ways:

- ESAA districts have less academically oriented programs;
- There is little difference in the distribution of non-traditional or traditional programs, although ESAA sites tend to have proportionately fewer programs which are characterized as traditional and more which can be characterized as non-traditional; and
- ESAA districts have more elementary school (and for this analysis, this includes junior high and middle level schools) which are classified as having a "vocational orientation."

The reasons for this distribution of program types are difficult to ascertain. One possible explanation is that the regulations for the ESAA program include the "uniqueness" of the magnet as one of its funding criteria. In the attempt to attain this objective, which many districts feel is unnecessary, the districts may have attempted to develop programs which may be different (in kind) from the rest of their school system.

A significant difference in where the magnet schools were located was found between ESAA and non-ESAA schools. ESAA schools were to be found primarily in mixed neighborhoods or in neutral city areas. They were not to be found particularly in minority neighborhoods ($r = -.40$) or to a lesser extent in majority neighborhoods ($r = -.218$).

The attendance areas established for the magnet schools also varied across the types of districts. ESAA funded sites tended to have limited attendance areas for their magnet schools (r = .319) or areas that combined a neighborhood area plus a citywide draw (r = .196). Non-ESAA funded schools tended to stress a citywide attendance area, a neighborhood plus a limited geographic attendance area for eligible students, and they also stressed a geographic plus a citywide draw. ESAA schools tend to arrange their attendance areas from immediate neighborhoods or geographic regions. Non-ESAA schools, in slight contrast, tend to draw their students from a wider geographic area.

The final difference noted between ESAA and non-ESAA funded elementary magnet schools showed that there was a tendency for ESAA funded schools to have less parental involvement. While it is only a tendency, there are few clues which help us to understand this phenomenon. The most obvious factor would be the comparative newness of the ESAA magnet schools and the consequent lack of time to develop this involvement. Site visits uncovered what appeared to be a surprising amount of parental involvement in many magnet schools. There is no reason to expect that such involvement by parents will not increase also in the ESAA schools.

The comparison of secondary schools reveals some of the same patterns. ESAA funded secondary schools are more likely to reach their total enrollment goals, but less likely to meet their minority student enrollment goals. ESAA schools do meet their enrollment goals for majority students more than non-ESAA schools. ESAA schools are also newer programs and tend to be more unique programs when compared to programs offered by non-magnet schools. Again this can be explained by their recent funding and by their effort to adhere to the regulations.

There are a few differences in the programs offered. Non-ESAA schools tend to offer more academically oriented programs; ESAA funded schools offer vocationally oriented programs. No other differences in program offerings were noted. It is of interest that ESAA funded schools tended to have staff (faculty) specially assigned to the school. ESAA schools are not specifically characterized by location in the city. However, when compared to the ESAA schools, non-ESAA districts located their schools in both minority and majority neighborhoods and also in neutral locations. In terms

of the attendance areas from which the schools draw their students, ESAA schools depend upon the more limited plan for attendance; i.e., students from neighborhood plus the city as a whole, or students from a limited geographic area.

In summary, the comparison of ESAA and non-ESAA funded schools has revealed some consistent differences. These differences are in terms of location of the schools, and attendance area from which students are recruited. There are also differences in the types of programs most offered. No other significant patterns appear, however, and for the most part, ESAA and non-ESAA funded schools share similar structures and processes.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presents a summary of conclusions reached in this study as a prelude to the recommendations which we hope will inform future policy decisions and ESAA Magnet School Program operations. Recommendations are based upon the results of the data analysis, upon the findings from site visits and upon our qualitative analysis.

6.1 Summary of Findings

Major Desegregation Findings

- Districts within which magnets were most successful for desegregation:

  --had either voluntary or strong court-ordered plans;
  --used magnets as only one component of a more comprehensive desegregation plan;
  --had a history of relatively smooth desegregation;
  --had a smaller percentage of minority students in the district than those less successfully desegregating.

- Magnet schools are not effective as the primary or solitary means of desegregation.

- As part of a comprehensive desegregation plan, magnet schools can assist in increasing district-wide desegregation, although indications are that most of the increase may be due to the effect of other techniques. (Note: We do not know if these other techniques are more effective with magnets as a part of the plan.)

- Magnet school programs have a beneficial effect upon attitudes toward desegregation.

- Magnet schools do not resegregate other schools in the district.

- Most magnet schools are able to meet their racial composition goals, although some schools achieve their goals at the expense of underenrollment of the projected school population.

- Magnet schools are used for diverse desegregation purposes, not always for the purpose of assisting in district-wide desegregation; although the ultimate effects may be seen at the district level.

- Magnet schools designed to address a limited problem or area are more effective in desegregation than those attempting to serve entire districts.
- The most important conditions for a successfully desegregating magnet school program are type of program, school attendance zone served, and location.

  --At the elementary level, non-traditional programs appeared to be associated more with success.

  --At the secondary level, there are indications that academic programs more easily enroll majority rather than minority students.

  --The more successful schools, particularly elementary schools, have an attendance zone which is more limited. This reflects the continued importance of the neighborhood school.

  --Mixed racial neighborhoods are the most acceptable locations for magnet schools on both the elementary and secondary school levels.
- Some planning activities, such as district-level needs assessments, may be weakly related to a successful magnet school program.

Findings on Magnet School Characteristics

- Elementary (and usually middle) level magnet schools tend to be distinctive because of a teaching approach. Secondary magnet schools are distinguished by their development of a discipline or subject matter orientation.
- Elementary magnet schools are found primarily in residential neighborhoods, both majority and minority; secondary schools are found more in neutral areas, such as business districts.
- Parent participation in magnet schools is very high.
- Magnet schools do provide for an increased chance for the parents to have some control over their child's schooling in a desegregating situation.
- In many districts, administrators successfully used strategic placement of popular teachers and principals to ensure the success of the magnet school.
- While both elementary and secondary schools have attendance areas which cover a wide geographic area (e.g., citywide), elementary schools are characterized by a limited attendance zone.
- The image of "excellence" determined more magnetism than the school's uniqueness.

- Some minority communities, although pleased with the improved education brought by magnet schools, were resentful because not all of the children in the neighborhood could attend them.
- Some resentment from non-magnet school officials was evident over the invidious distinctions caused by magnet schools, particularly when the magnet school was not different from their own.
- There was some evidence of "skimming," and of magnet schools becoming "havens" for majority and middle-class students. But there was evidence also of "reverse skimming," where parents were using magnet schools as a means to give their children with learning or behavioral difficulties a "last chance."
- There are some existing schools which are being labeled as magnets without changing the curriculum, subject matter or teachers.

Findings for the ESAA Magnet School Program

- The objectives of the ESAA Magnet School Program are vague and diffuse; as such, they technically allow the funding of magnet school programs for a wider variety of reasons than the expressed purpose of district-wide desegregation.
- There are two criteria for awards of ESAA Magnet Grants: (1) statistical reduction of racial isolation, (2) quality of the proposal. The second frequently overwhelms the first.
- Of the 12 ESAA Grants awarded to districts, a number showed no improvement in desegregation during the pro-year or were increasing minority group isolation in the project year. Awards were made, also, to districts in which there was very little minority group isolation.
- There was little significant difference between ESAA funded and non-ESAA funded magnet schools.
- ESAA funded magnet schools more often met their racial composition goals, but the ESAA goals are more lenient (e.g., 20-50 percent minority) than those for non-ESAA districts (district average minority enrollment ± 5 percent.)

6.2 Recommendations

The ESAA Magnet Program

- The funding level for the ESAA Magnet School Program should be maintained at its current level, or increased only gradually. This is to promote the more complete understanding of the roles magnet schools can effectively perform in school desegregation and to allow for the careful planning for the support of the most effective use of magnet schools.

Magnet schools are no panacea for segregation. This study has shown that there is a limited amount of desegregation that can be attributed directly to magnet schools. The study has also shown that magnet schools are successful in achieving their desired racial composition and that they are associated with increased desegregation in many school districts.

Magnet schools for the purpose of desegregation are relatively new. We believe that, at this time, not enough is known about their effectiveness in school district desegregation nor about their possible consequences for the districts, the communities they serve or particularly about the effects upon the children. It is too soon to depend on them as a national scale desegregation strategy. Many of those programs receiving program funds have at best only modest desegregation needs. To the extent that this situation continues, there would be less reason for increasing the level of funds for the program.

This recommendation urges a careful and rational approach to the planning of their uses and the need to understand more fully the roles magnet schools can play in school desegregation. Too rapid an expansion of the program creates the danger that the program will not employ the most effective strategies and that the effectiveness of magnet schools would be falsely assessed. This would be compounded by the development of a constituency in support of an ineffective program. It would become difficult to modify the program at that point.

- USOE should clarify the objectives for the ESAA Magnet School Program.

The ESAA Magnet School Program should clarify its mission and its objectives as an aid to desegregation in local school districts. Currently, the program does not seem to be meeting a specified set of national priorities, nor is it clear that the program objectives reflect a clear pattern of priorities. For example, at least four objectives in the legislation and related regulations provide a justification for a wide variety of magnet school programs. These programs could range from those designed to provide new desegregation to those designed to maintain levels of desegregation or to avoid resegregation to those designed to provide a non-segregated experience for students. The legislation and the regulations stress a comprehensive desegregation program needed by the district; but awards are made to districts without a comprehensive desegregation plan and awards are made to districts which show only a limited need for desegregation assistance.

We see magnet schools as possible serving many diverse purposes in school desegregation activities. However, the ESAA Magnet School Program, at this stage of its development, should clarify its mission and objectives through an explicit statement of priorities so that applicants will be better informed and so the program can be focused to a greater effectiveness. We believe that the ESAA Magnet Program regulations should explicitly establish as its first priority that districts must: 1) be in the process of new desegregation, and 2) must have a comprehensive desegregation plan (i.e., a plan that covers all schools and grade levels). Further, we suggest that the district must be able to show how their proposed magnet plan will assist in district-wide desegregation.

- Magnet component programs rather than magnet only programs should be given priority for ESAA funding.

The evidence from this study has shown that magnet component programs (magnet schools used as one technique in conjunction with other desegregation strategies) are more successful than magnet only programs (magnet schools used as the major desegregation strategy) in assisting in desegregation. We believe that magnet component programs meet the intent of the legislation. Further, the success and utility of magnet schools as the major or only desegregation technique, with the exception of very small programs,

have not yet been demonstrated on a large enough scale to provide us with an understanding of the conditions under which such a program would work. At this point in time, therefore, support of magnet only programs would be very much on an experimental basis. In order not to represent unfairly the negative utility of the magnet school approach, magnet only support should be provided on a tightly controlled, explicitly innovative program basis.

- The ESAA Program Office should separate its review of the effectiveness of magnet school programs from the effectiveness of district-wide desegregation for purposes of awards and evaluation.

Although we have stressed the need for districts to show how magnets will assist in district-wide desegregation, we do not believe that this recommendation is contradictory. A magnet program should "fit into" the overall design for district desegregation. However, to assess the success of the magnet program in terms of the district desegregation effort does not separate the impact of magnets from that of other desegregation efforts. Therefore, in placing the responsibility for the success of failure of the district upon the magnet program, one can unfairly criticize the magnet program, or conversely, give credit to a magnet program when desegregation is really the result of other techniques. We suggest that each proposed magnet program be assessed prior to award in terms of the objectives for which it was designed by the district. In such a review, the Program Office should separate the magnet program purpose from the district-wide criterion. The magnet program could be assessed by separate criteria--e.g., was it designed to provide desegregation of a particular neighborhood or area of the city--and by the significance of the magnet program to the overall desegregation effort? An application would only be funded if district-wide desegregation was, indeed, taking place. Such an approach would be helpful not only in the awards process, but would clarify as well the criteria of effectiveness to be used in future evaluations.

- USOE should review the Magnet School Program and its awards criteria in relation to how fair it is for school districts with a high proportion of minority students.

Reference has been made earlier to the problem of the ESAA awards criteria and school districts with a high proportion of minority students. This problem has two related elements. First, the high proportion minority

districts have greater difficulty in gaining statistical points for desegregation achievement; that is, even under complete equity of distribution of minority students, they would be penalized by the ESAA awards formula. Second, even if the high proportion minority districts were awarded magnet school grants, this effort may result in a negligible impact upon district-wide desegregation or it could result in the maintenance of or increase in segregation of the non-magnet schools. This leads to the question of whether ESAA funds should be utilized under such conditions. Indeed, the findings presented in this report show that the most successful magnet program were in districts which had a smaller percentage of minority students enrolled in the district public schools. This recommendation would appear to be contradictory to such evidence.

However, to support only those districts which were "easier" and which had a higher chance of making the program appear effective, would deny the possible utility of magnet schools in those districts most in need. We still do not know of the creative uses to which magnet schools might be put in these cities. Since magnet schools are viewed as a "desegregation tool" and not the "desegregation answer", HEW/OE should support those efforts which may assist districts to achieve greater desegregation and desegregation with a minimal amount of social disruption.

The federal Program Office should consider remedies to this situation. Such remedies could consist of: using the "up to 5 grants" set aside contained in the regulations for such districts; relaxation of 20-50 per unit minority student composition requirement to allow a higher proportion of minority students to attend ESAA supported schools; or develop a new awards mechanism and criteria for these districts, perhaps based on the impact magnets will have upon specified areas of the district.

The Awards Process

Educational Criteria

The Educational Criteria contain a number of factors which, based upon our analysis and observation, appear to have little relationship to the success of magnet school implementation. In Chapter Five we discussed a number of these criteria. We recommend that they be deleted from the consideration of proposals submitted for funding. We recommend the following modifications to the Educational Criteria.

- Educational Criteria should place more emphasis upon desegregation related activities.
- An additional point award criterion should be added for plans to provide training for teachers in the area of interracial and intercultural relations.

The regulations prepared for FY77 contained only two activities specifically related to desegregation activities. These are:

> Extent activities promote interracial and intercultural understanding (3 points); and
>
> Extent curriculum includes materials pertinent to racial and ethnic student composition (2 points).

These two factors contribute 5 points to a Project Design total of 24 points. Their influence in the awards process should be increased by awarding more points in the final determination. In addition, we suggest that teacher training or plans for assisting teachers in the areas of interracial and intercultural relations should be included. In our site visits, we did not find many magnet schools with plans to provide training for teachers in intergroup relations or in some of the problems which are often attendant to a desegregated school. Since the success of magnet schools is dependent, to some degree, upon harmonious relationships between the racial groups and upon the retention of students in these schools, it would seem appropriate to provide teachers with the training that would assist them to be more effective in such situations.

- An award criterion measuring location of the magnet school(s) and techniques to be used to ensure student enrollment should be added.

The evidence from this study indicates that location is related to the success of the magnet school in reaching its enrollment and racial composition goals. The evidence also indicates that this factor will impact differently on majority and minority students and families. We do not believe that it is wise nor possible to require that magnet schools must be located in racially mixed neighborhoods so that the area is not a threat to majority or minority students. However, the importance of this factor is such that we suggest applicants should be aware of the implications of where the school is located. More important, the applicant should provide plans through which the students are "helped" to be attracted to the school (e.g., strategic placement of a popular principal or teacher).

Therefore, applicants should specify the proposed location of the magnet school(s) (in terms of composition of the neighborhood), the problems which they anticipate in attracting majority or minority students to the school(s) and the activities they will implement to ensure the appropriate mix of students. These activities should specify <u>precisely</u> what strategies they will employ and why these strategies will overcome the possible difficulties.

- An additional point award criterion assessing the attendance area for magnet schools.

Magnet schools which restricted all or part of their enrollment to limited attendance zones were found to be more successful in reaching enrollment and racial composition goals. The limited attendance areas helped to build upon the neighborhood concept and allowed districts to have more control over which areas of the district were to be desegregated. The more limited attendance areas were probably attractive also to parents who could estimate travel time for their children and had a better means of estimating the composition of students within the schools.

Statistical Criteria

- Statistical Criteria should be used to establish a more effective way to meet program objectives through:
  a. Establishing a "threshold" of eligibility for funding; and
  b. Requiring that progress in desegregation in the project year be demonstrated by the district in order to be awarded ESAA magnet funds.

The Magnet School Program regulations and the Magnet Program Office stress that funds should go to those districts in the process of new desegregation activity. The evidence from our analysis showed that this criterion was not always reflected by the awards. Districts received funding which showed no desegregation activity prior to the project year nor in the project year itself. Further, districts in which minority group isolation increased during the project year were funded. This recommendation is designed to assist the Program to conform to its stated aims and to provide some clarification of the objectives for the program.

Specifically, we recommend that, after districts have been identified as to the comprehensiveness of their desegregation plan (as suggested in the previous recommendation), they be identified by their new desegregation activity. We suggest that a "threshold of eligibility" should be established, that is that highest priority be given to those districts whose total statistical score shows some prior desegregation activity. We suggest a "threshold" of 5 points should be established as a criterion for funding. To rephrase this recommended action, no district should be funded if it cannot show at least a modest improvement in desegregation over a three year period (i.e., Base Years I and II, plus the Project Year). The intent of this recommendation is to ensure that districts being funded are those in which some desegregation is taking place.

The second part of this recommendation is of equal importance. Only those districts which show an improvement in desegregation during the Project Year should be funded. Since the Project Year is the first year during which ESAA Magnet Program funds will be used, it is not unreasonable to expect that the combination of the new magnet school effort and the districts continuing desegregation effort should result in a positive desegregation experience. If such progress cannot be exhibited, the district is not experiencing new desegregation nor are the magnet schools providing the assistance in meeting the major objective of the program--desegregation achievement.

We recognize that these recommendations will not, in and of themselves, meet all of the varying problems and conditions presented by the diverse school districts which will apply for assistance. However, the first ESAA awards process resulted in districts being funded which, given the announced objectives of the program, should not have been given funds. By requiring evidence of new desegregation and desegregation progress in the Project Year, the more obvious problems in the awards process may be overcome.

General Issues

- **The ESAA Magnet School Program should no longer provide support for magnet schools which are educational centers.**

The Act and the regulations specify that "educational centers" may be funded as magnet school programs. Our site visits encountered two kinds of such centers, those programs established in a school to which pupils were brought for a few hours a day or week, and those programs within a school that were attended for a few hours a week by the pupils in that school. In both situations, but particularly in the former, we found that desegregation was defined by numbers of students and that real intergroup contact was minimal at best. This kind of program allows a district (or a school) to claim the majority-minority mix as a desegregated experience; but the amount of contact and the kind of contact between pupils is quite peripheral. We conclude that such programs should no longer be supported by ESAA Magnet School Program funds.

- **The ESAA Magnet School Program should more specifically emphasize its role as a desegregation program, and not its role as an educational innovation program.**

There is an underlying tension between magnet schools as educational innovations or as desegregation techniques which is found throughout the regulations and in the school districts we visited. In the regulations, in particular the educational award criteria, educational factors far outweigh the concerns (expressed via the points awarded) given for desegregation activities. There is little in the educational criteria which would guide the school district or the federal program to establish or monitor desegregation activities.

It is clear that the primary motivating force for most of the programs is educational, not desegregation, particularly for the teachers and parents. There were few desegregation related activities to be found in most schools. It seemed to us that most districts, even those receiving ESAA funds, viewed magnet schools primarily as educational improvement activities for whom desegregation, in terms of the distribution of students, was a necessary appendage in order to receive the required funding. In many ways this "tension" in the purposes to which magnet schools have been employed represents the choice between two positives. However, the ESAA Magnet Program

represents support for activities specified by Congress to have as its mission and intent, the improvement in desegregated schooling. To the extent that the ESAA program does not clarify its desegregation thrust, funds will be provided more for general educational activities than for desegregated schooling. For this reason, the ESAA Magnet Program should develop those guidelines which will promote programs and training for teachers, pupils and parents.

The lack of emphasis upon desegregation activities will also cause problems in monitoring the program. Program Officers may expect that magnet schools will have desegregation related activities. Our site visits indicate that school districts may perceive that there is little required of them in the planning of magnet schools which relates to any great extent to desegregation, other than fulfilling the 20-50 percent minority enrollment guidelines.

- USOE should review the Magnet School Program and the regulations with regard to their impact upon the minority community.

To some, particularly members of the minority community, the ESAA Magnet School Program is unfair to minorities. They reason that magnet schools are designed primarily to attract the whites to stay in the school system and, thus, magnet schools become havens for whites. This is often seen as a reward (excellence in educational opportunities) for the group representative of the power to establish segregation and as a continued denial for equal (proportionate) opportunity for minorities. When, for example, a school district is 40 percent majority and 60 percent minority, more minorities, proportionately, will be denied access to the magnet school. This is due, of course, to the ESAA 20-50 percent minority enrollment requirements. The restrictions on the proportion minority represent an approach to the use of magnet schools which is prejudicial against minorities and which favor majorities. Indeed, the view that majority students will not attend a school of excellence with a minority population of more than 50 percent is seen as support of an "ideology" which continues to denigrate minorities.

We lack sufficient information about the interaction of higher minority enrollment limits and the perception of excellence of an educational program. Would whites flee the school system or not attend the magnet schools if magnet schools were 55 or 60 percent minority? Information about the effectiveness of magnet schools is still very limited. We do not know, for instance, if

magnet schools influence the life choices that parents will make for their children's education. We do not know the influence that magnet schools, and their excellence in education, may have upon the "tipping point" concept--that point of minority enrollment at which the majorities will flee the school system. We need to know how excellence of education can be used to make a difference in the life choices of parents, both majority and minority, particularly where it concerns the education of their children. We suggest that this problem is of sufficient importance to the image of the ESAA Magnet School Program to merit serious concern.

BIBLIOGRAPHY

Becker, H., et al. Boys in White. Chicago: University of Chicago Press, 1961.

Bowler, M. "City magnet schools: Open enrollment fails to halt segregation." Baltimore Sun, November 25, 1972, p. 1A.

Coleman, J. S., et al. Trends in school segregation, 1968-1973. Washington, D.C.: Urban Institute Paper 722-03-01, 1975.

Farley, R. Can governmental policies integrate public schools? Paper presented at the meeting of the American Sociological Association, New York, September 1976.

Foster, G. "Desegregating urban schools: A review of techniques." Harvard Education Review, 1973, 43.

Glaser, B., and A. Strauss The Discovery of Grounded Theory. Chicago: Aldine Publishing Co., 1967.

Leubsdorff, H. "Completing the desegregation remedy." Boston University Law Review, 1977, 57, 39-95.

Orfield, G. "Desegregation and the cities, the trends and the policy choices." Unpublished paper, 1976.

Prewitt, K., and H. Eulau "Political matrix and political representation." American Political Science Review, 1969, 63, 427-441.

Rossell, C. "School desegregation, white flight and resegregation." Unpublished paper, 1977.

Rubin, L. Busing and Backlash. Berkeley: University of California Press, 1972.

Sampson, P. "Options--School Desegregation." Milwaukee Urban Observatory, 1976, p. 1.

Sieber, S. "The integration of fieldwork and survey methods." American Journal of Sociology, 1973, 78 (6).

Weiss, C. Evaluation Research Methods of Assessing Program Effectiveness. Englewood Cliffs, NJ: Prentice-Hall, 1972.

APPENDIX A

INTRODUCTION

This technical appendix discusses the sampling procedures for selecting school districts for the study; sampling of magnet schools for sites that we visited; the instrumentation and data collection procedures; variable construction and general analytic procedures.

A.1 Selection of School Districts

The sample is composed of 18 school districts, all of which were visited by Abt Associates staff members. Seven ESAA funded sites were selected to be a part of the sample; eleven non-ESAA funded sites were selected for participation.

The sample reflects the desire to maximize the selection of sites with the greatest policy interests, and at the same time to minimize possible bias in the selection procedure which might reflect the orientation of either Abt Associates or the Office of Education/OPBE. To achieve these purposes, the sampling procedure stratified the potential population along two major dimensions: percent minority in the school district population; and whether the desegregation plan utilized a magnet only or magnet component approach. Within these stratifiers, we selected candidate sites on a random basis. Since we did not know the status of the magnet school program in all of the sites, we called each selected site to confirm their suitability for the study. We then included in the sample of sites, those districts which indeed had a magnet school program, were undergoing desegregation and in which magnet schools could, in our estimation, have an impact upon district desegregation activities. This last point was determined operationally for this study by including only those school districts which had a minority enrollment of between 10 and 60 percent. Cities, for example, that were excluded from our sample because their minority population was considered too large for a magnet program to have a chance of showing possible success, were St. Louis, MO; Detroit, MI; and Wyandanch, NY.

The selection procedure has generated 18 sites which appear to represent a variety of contexts and conditions within which magnet schools operate. There are small, medium and large cities; a wide range of percent minority in the student populations; and a good distribution of sites in terms of whether desegregation was court ordered or non-court ordered. These variations in site characteristics provide a basis for useful and interesting data on the magnet school concept used in school desegregation. The final sample is presented in terms of these stratifiers in Table A-1.

Table A-1

SELECTED SAMPLE - MAGNET STUDY

Type of Magnet Program	Percent Minority in School District	
	< 30	> 30
Magnet Only	N = 4 1. Racine, Wisc. 2. San Diego, Cal. 3. Tacoma, Wash. 4. Portland, Ore.	N = 4 1. Milwaukee, Wisc.* 2. Buffalo, N.Y.* 3. Houston, Tex. 4. Dallas, Tex.
Magnet Component	N = 5 1. Tulsa, Okla. 2. Des Moines, Iowa 3. St. Paul, Minn.* 4. Louisville, Ky. (Jefferson County) 5. Rockville, Md. (Montgomery County)	N = 5 1. Dayton, O.* 2. Boston, Mass.* 3. Montclair, N.J.* 4. Springfield, Mass. 5. Stockton, Cal.*

*Indicates ESAA Magnet Program funded sites.

A.2 Sampling of Schools Within Sites

A minimum of three magnet schools in each site were selected to be visited by site team members. This selection process took place in two stages. First, based on the number of magnet schools at each grade level in a district, the Abt Associates staff determined what grade level would be visited. (For some districts, all magnet schools were operating on one grade level; however, in instances where magnets were found across all three grade levels--elementary, middle or junior high and senior high school--Abt Associates staff identified the level to be visited prior to making the site visit.) This was a purposive selection procedure designed primarily to provide sufficient variation in the sample between elementary and secondary schools.

Second, in order to maximize exposure to the various magnet program characteristics (including such things as the academic orientation and location of the school), schools were sampled purposively by the site team members and school district staff. While this procedure could in no way be standardized across sites, we feel confident that we obtained an interesting cross section of program types.

It should be noted that if there was ample time to visit more than the specified number of magnet programs, site teams were encouraged to do so. Thus, the actual number of sampled magnets is more than 54 (3 x 18), since some site teams visited more than three schools in a site.

A.3 Instrumentation and Data Collection Procedures

All 18 districts in the sample were visited in the Fall and Winter of the 1977-78 academic year by teams of two interviewer/observers. Visits took from three to four days, depending on the size and the complexity of the site. The site teams had attended two training sessions prior to the visits. Training covered all aspects of the site visits, i.e., objectives of the research, study questions, variables and instrumentation, selection of interviewers, and interview techniques. The exploratory/descriptive nature of the study demanded a data collection approach that required the participation of site teams more as independent researchers than as surveyors. The training focused on developing in site teams the attitudes, skills and familiarity with the study that such a role required.

The site visits were conducted in three waves, and debriefings were held after each wave. The first wave, which included three sites visited by the

core study staff (i.e., Project Director and Deputy Project Director), served as a pilot for procedures and instrumentation. The debriefing following this wave served as a final training session and was attended by all staff. In addition, this debriefing resulted in some refinements of study questions, procedures and instrumentation.

Two types of sources for data collection were used. In the first were data collected by unstructured open ended interviews with a range of district, school and community representatives. Included as respondents were:

- The District Superintendent or Delegate
- Various District Administrators (e.g., Pupil Personnel Officer, Director of Elementary Schools)
- Principals of magnet schools
- Teachers in the magnet schools
- Principals and Teachers of non-magnet schools
- Parents of magnet school children
- Representatives of community groups (e.g., NAACP, Anti-Busing League)
- School Board representatives

In the second group are sources which provide the quantitative components of the study. Included here are various kinds of documentation such as

- School Enrollment Reports
- Desegregation Plans or Court Orders
- District Demographic Data

The interviews were guided by an Interview-Agenda which was both site- and interviewee-specific. This Agenda was developed by the site team and was based, in part, upon documents obtained from the sites before the visit. The Interview Agenda was generally organized around variable groups each of which contained an array of variables. Table A-2 displays these variable groups and variables. The coding of variables was done after the site visits were completed.

A.4 Variable Construction

Once the data were collected, the site teams were used as respondents and were asked to complete a team rating sheet for their respective sites. The rating sheet was constructed based on the variables and variable groups listed in Table A-2. Due to the large number of variables and the small sample sizes (18 LEAs, approximately 60 sampled magnet schools), the variables within each

Table A-2

Variables Within Each Variable Group

Context

A. School District Characteristics

- number of pupils at elementary, jr. & sr. high levels & in private schools
- number of schools at elementary jr. & sr. high levels & in private system
- degree of difficulty in transporting pupils
- enrollment trends (since 1968 if data available)
- racial composition of school population
- racial composition trends of school population (since 1968 if data available)
- difference between racial composition of school population (if available from OCR or census)
- racial composition of teaching staff
- PPE
- match between district, community boundaries

B. Community Characteristics

- % home ownership of minorities in community served
- racial composition of community served
- degree of residential integration in community served (if readily available)
- median educational level of community served
- median income level of community served
- occupational structure of community served

C. Desegregation History

- total # of decisions/orders to desegregate from the inception of desegregation to the present
- mean time interval between orders
- total length of desegregation process from inception to the present
- amount of desegregation accomplished prior to implementation of final plan (% blacks and whites reassigned)
- # of district appeals of orders to desegregate
- motivation for desegregation (e.g., voluntary choice of school board, pressure/litigation by minority groups)
- # of superintendents during desegregation process

D. District Desegregation Plan

- source of plan
- degree of control over plan exercised by source
- degree of specificity in plan provided by source
- racial composition criteria for schools specified by plan
- scope of desegregation achieved by plan
  - grade levels desegregated
  - % of schools desegregated
  - % blacks vs. whites reassigned
- degree of reliance on magnets
  - % desegregationby portion of students served
  - % desegregation by portion of schools served
- racial composition goals for magnet schools
- techniques (other than magnets) used
- time frame for implementation plan
  - length of time between final decision to desegregate and initiation of plan
  - length of time between initiation and completion of implementation

Process

E. Magnet School Planning

- administrative level of magnet office
- length of planning period
- openness of planning process (i.e., degree of involvement of various constituencies
- quality of needs assessment
- quality of publicity given planning
- techniques used to involve constituencies
- issues/problems addressed during planning
- solutions to problems (by problem)

F. Magnet School Characteristics

Pupil Characteristics

- racial distribution of pupils served
- total # of pupils served
- length of period for recruitment of pupils
- locus of control of pupil recruitment process
- procedures used in pupil recruitment
- degree of involvement of various groups in the pupil recruitment process
- existence of waiting list for admission

Staff Characteristics

- racial distribution of staff
- process by which staff placed in school (recruited by district procedures, recruited by principal personally, voluntary transfer, assignment)
- locus of control of recruitment process
- degree of community involvement in teacher recruitment process
- degree to which staff especially trained for magnet program

Program/School Characteristics

- type of program
- degree of uniqueness of program
- degree of parent involvement
- whole school or part school program
- # of years as magnet
- location of school
- admission requirements for pupils

G. Magnet School Enrollment

- difference between projected and achieved enrollment and racial composition for magnet schools

H. Desegregation of Districts

- number of schools failing to meet district-specific desegregation goals (i.e., number of schools whose achieved racial composition differs from that specified or projected by the district desegregation plan)
- change in the index of dissimilarity with the implementation of magnets
- change in the index of school segregation with the implementation of magnets

I. Community Attitudes

- degree to which magnets have contributed to improvement of community attitudes towards desegregation
  - support of various constituencies for district magnet program
  - support of various constituencies for desegregation

group were reduced to form summary scales or classifications. This reduction was accomplished by both conceptual and empirical means (as provided with the use of cross-tabulations.) Variables were deleted which had excessive missing data or which were found not to have adequate variance.

In the case of the quantitative data, such as pupil enrollment reports and community demographics, the data were entered into the computer in raw form. That is, these data did not undergo any manipulations prior to being placed on the data file. Since the enrollment data from the various school districts focuses on the most basic dimension of effectiveness, i.e., the ability of magnets to meet their own enrollment and racial composition goals, further discussion of these data is included in the following section on Analytic Procedures.

A.5 Analytic Procedures

The analytic procedures used in each chapter were somewhat varied. Chapter Two, for example, presented a description of magnet schools and the communities in which they are found. Chapters Three and Four, which focused on magnet program effectiveness, used the school enrollment data that was collected during site visits to develop measures of effectiveness. A detailed discussion of the development of the measures of effectiveness is presented in the following sections.

A.5.1 Formulating Measures of Magnet Program Effectiveness

The rationale underlying the measures of Magnet Program effectiveness used in this study is based on the policy definition of Magnet Schools. For national policy, Magnet Schools are seen as a procedure for promoting school desegregation through the use of quality educational programs which will attract students of all ethnic and racial groups. When properly implemented as a method of desegregation, Magnet Schools will have two characteristics: they will attract both minority and majority students; and, they will be racially balanced. These two features, student "subscription" to the program and racial balance, were quantified as measures of Magnet Program effectiveness according to the procedures described below.

Magnet School Attractiveness

Variables representing the extent to which Magnet Schools were able to attract pupils, were derived from the school enrollment data and

the schools' projections of how many pupils of each ethnic group would be attending the school in 1977. In using the projected enrollment figures, we make the following assumption which is crucial to the variable definition: the projected number of minority pupils which a school estimates for attendance in 1977 is a number which if attained will place the school within the racial balance guidelines specified for the district. Each district may be subject to different racial balance guidelines; however, since each school's projected number of minority pupils presumably is responsive to the racial balance mandates of its district, then the extent to which a school actually enrolls the numbers of pupils it projected is the extent to which school is effective in drawing pupils. With this rationale, we formulated the following measures of Magnet Program attractiveness:

- o Total subscription rate. The total enrollment of the school in 1977 divided by the projected enrollment.
- o Minority subscription rate. The number of minority students enrolled in 1977 divided by the number of minority students projected for enrollment in 1977.
- o Majority subscription rate. The actual number of white pupils enrolled in 1977 divided by the number of whites projected for 1977.

For the purposes of this study, minority enrollment was defined by subtracting the number of whites from the total enrollment.

These subscription rates ranged above and below the value of 1.0, the point at which the actual enrollment equaled the projected enrollment. Since the intent of these measures was to represent whether schools had succeeded in attracting pupils, any school with a subscription very close to or greater than 1.0 could be said to have succeeded as a "magnet". Lesser values would represent the extent to which schools approached their pupil attraction goals. For the purposes of this study, we declared all values greater than .90 to be 1.0, since the concept of "overly attractive" was no more interesting than "successfully attractive".

Note that with three variables representing school drawing power, it may be possible for a school to be on target for total subscription rate, but under shoot its minority or majority subscription rate. All three variables were formulated since they represent somewhat different program dynamics.

Racial Balance

A variable representing the extent to which a Magnet School achieved racial balance was derived from the enrollment data. Once again, the critical assumption is that the projected numbers of majority and minority students for 1977 are such that, if attained, the school would be in compliance with the district's racial balance guidelines. Racial balance can be defined as the difference between the majority and the minority subscription rates. If both are 1.0, the school will be balanced. If both minority and majority pupils are oversubscribed or undersubscribed to the same extent, then the school would still be racially balanced, even though it may have more or less total pupils than projected. For example, if the minority subscription rate were 1.25 and the majority rate were 1.25, the school would nevertheless have attained a balance of pupils in compliance with the district mandate even though enrollment was higher than planned. Conversely, to the extent that the majority and minority subscription rates differ, there appears a shortfall in the obtained number of pupils for one of the groups, thus a tendency toward racial imbalance. The magnitude of the racial imbalance can be indicated by the difference between the two subscription ratios. Since the direction of imbalance was not of immediate interest for the purposes of this variable, the absolute value of the difference between minority subscription rate and majority subscription rate was taken as the measure of racial balance for each school.

The racial balance variable was computed on the raw score range of subscription rate values before values in excess of .90 were set to the value 1.0. The distribution of this new variable ranged from 0 to 2.59. Clearly, the greater the imbalance between minority and majority subscription rates, the larger would be the resulting index. To simplify interpretation, the values of the new variable were subtracted from 2.6 so that small numbers would reflect poor balance and larger numbers approaching the maximum of 2.6 would indicate closer compliance with district standards. Thus, the formula for computing racial balance is as follows:

$$\text{Racial Balance} = 2.6 - \left| \text{Minority subscription} - \text{Majority subscription} \right|$$

A.5.2 Missing Data Problems

Two types of missing data were encountered in formulating the subscription rate and balance variables; the enrollment data, and the projected enrollment data. Since these data were crucial to the definition of magnet program effectiveness, we employed the following procedures to minimize missing data.

Enrollment Data

Enrollment data were collected by the interviewers on site from existing sources in the Central Administrative Offices. These data were generally quite complete; however, the single greatest cause of missing data was the fact that enrollment figures were sometimes recorded for an entire school building when a magnet program was implemented in only a part of the school. In addition, at times the minority enrollment was recorded for the entire building. Through cross-checking with other data sources, accurate magnet program enrollments were obtained for all but eleven schools within the sample of 227 magnet schools on the data base. These eleven cases remain missing; thus, no index of magnet school effectiveness could be calculated for them.

Projected Enrollment

As the second component in defining school balance and subscription rates, projected total and minority enrollments are essential. Of the 227 magnet schools, 25 were missing projected enrollment figures. Projected enrollment was estimated through the following technique: For those schools with enrollment data extending back over four years, as well as with valid projections for 1977, we obtained an estimate of projected enrollment by averaging the enrollment from 1973 through 1976. If this estimate corresponded closely with the 1977 projected enrollment, it could serve as a substitute for projected enrollment in those schools with previous enrollment data and missing projected data. This estimate correlated .89 with obtained projections for a sample of 138 schools. Thus, projected enrollment was estimated for 14 of the 25 cases which had data appropriate for deriving the estimated enrollment, since .89 was considered a level of reliability equal to or greater than that of many primary dependent variables used in most evaluation studies.

The subscription rates and balance variables needed one more piece of information in order to be calculated, namely the projected number of minority and majority students. These data were obtained as follows: Each district has its own mandate for racial balance levels in the schools. Given the projected enrollment, we applied the mandated racial balance guidelines to obtain the number of minority students a school would have to enroll in order to be in compliance with local guidelines. Most often the guidelines were stated as a range of percent minority in the schools, thus a minimum and maximum number of minority students for each schools was obtained within which, if obtained, the school would be in compliance. The obtained minority enrollment was divided by the maximum minority enrollment permissible under the guidelines. The resulting ratio expressed the minority subscription rate. A similar index was obtained for the majority enrollment figures. Then, the difference between these two ratios represented the "balance" variable (once again subtracted from the constant of 2.6 as discussed above.)

The foregoing procedures were applied to 14 of the 25 schools with missing enrollment data, resulting in a total of 213 cases with valid subscription and balance variables on the magnet school sample of 227.

APPENDIX B

INTRODUCTION

This appendix presents additional information associated with Chapter Three: Assessing the Contribution of Magnets to District Desegregation. Included is a discussion of the composite index; various correlation matrices and individual district values on the indices S_{mw}, D, and $\frac{S_{mw}}{D}$.

B.1 Calculating Magnet Program Effectiveness

Balance and Enrollment

Using the procedure outlined in Appendix A, values for the schools in the district were averaged. These mean scores thus became the Balance and Enrollment figures used in the composite index of magnet program effectiveness. The categorization of these variables was based solely on the distribution of the scores.

Balance was divided into three categories: high, ranging from 2.53 to 2.41 (N = 8); medium, ranging from 2.35 to 2.16 (N = 6); and low, ranging from 2.05 to 1.41 (N = 4).

Enrollment was divided into two categories: high, defined as districts which were 97% and over their enrollment goals (N = 10); and low, for those districts which had obtained less than 97% of their enrollment goals (N = 8). Table B-1 displays the district values for the Balance and Enrollment variables.

Community Attitude

As part of the process in recording their field experiences, site teams were asked to give their impressions of the degree to which magnets contributed to the improvement of community attitudes to desegregation. There was a four point scale for this variable with choices of: a great deal; a moderate amount; somewhat; and, not at all. For the purpose of computing the index, the first two categories were collapsed, resulting in three categories of Community Attitude to Desegregation: high, medium and low. Table B-2 gives the responses of the site teams for each district for this variable.

Table B-1

District Values for Balance and Enrollment

District	Balance Value	District	Enrollment Value*
Des Moines	1.41	Jefferson Co.	.72
Houston	1.76	Dallas	.80
Dallas	1.89	Houston	.87
St. Paul	2.05	Stockton	.88
Jefferson Co.	2.16	Dayton	.91
Boston	2.18	San Diego	.92
Dayton	2.21	Boston	.93
Portland	2.31	Racine	.95
San Diego	2.32	Tacoma	.97
Racine	2.35	Milwaukee	.97
Springfield	2.41	Springfield	.97
Montgomery Co.	2.42	Montgomery Co.	.97
Tulsa	2.44	Portland	.97
Milwaukee	2.44	Buffalo	1.00
Buffalo	2.44	Des Moines	1.00
Stockton	2.49	Montclair	1.00
Montclair	2.51	St. Paul	1.00
Tacoma	2.53	Tulsa	1.00

* Some districts may have surpassed their total enrollment goals; however, all values greater than or equal to one were given a value of one.

Table B-2

District Rankings on Community Attitude

A Great Deal	A Moderate Amount	Somewhat	Not At All
Des Moines	Boston	Dayton	Dallas
Montclair	Buffalo	Houston	Springfield
	Racine	Jefferson Co.	Tulsa
	Montgomery Co.	Milwaukee	
	St. Paul	Portland	
	San Diego	Stockton	
	Tacoma		

Table B-3

Correlation Matrix of District Desegregation Variables

	$\Delta \frac{Smv}{D}$	District % Minority	Type of Desegregation Plan*	Comprehensiveness of Deseg. Plan	Role of Magnets in Desegregation Plan	Minority Support for Desegregation	Majority Support for Desegregation
$\Delta \frac{Smv}{D}$	1.00						
District % Minority	-0.71	1.00					
Type of Desegregation Plan*	0.79	-0.73	1.00				
Comprehensiveness of Deseg. Plan	0.48	-0.20	0.32	1.00			
Role of Magnets in Desegregation Plan	-0.22	0.18	-0.03	-0.08	1.00		
Minority Support for Desegregation	0.38	-0.38	0.36	0.09	-0.38	1.00	
Majority Support for Desegregation	0.52	0.09	0.62	0.12	0.09	0.58	1.00

* Type of desegregation plan refers to plans not ordered by Federal or State Courts.

Table B-4

Correlations of Magnet Program Effectiveness With Process and Community Contextual Variables

Process and Community Contextual Variables	Magnet Program Effectiveness Variables			
	Magnet Program Effectiveness Composite	Balance	Enrollment	Community Attitude
Amount of Desegregation Prior to Magnets	0.36	0.22	0.15	0.47
Type of Desegregation Plan*	0.27	-0.04	-0.49	0.62
District Percent Minority	-0.13	-0.03	-0.35	-0.37
Scope of the Magnet Program	0.29	0.24	0.25	0.22
Conduct of Needs Assessment	0.20	0.32	-0.05	0.27
Minority Support for Magnets	0.46	0.08	0.49	0.43
Majority Support for Magnets	-0.04	0.05	-0.22	0.39

* Type of desegregation plan refers to plans not ordered by Federal or State Courts.

Table B-5

Racial Balance or Segregation

	1	2	3	4	5	6	7
	1977	1976	1975	1974	1973	1972	1977-1972 ΔD
Montclair*	.066	.108	.174	.198	.162	.150	-.084
Jefferson Co.*	.098	.142	.208	.808	.750	.754	-.656
Racine	.100	.102	.088	.278	.304	.300	-.200
Des Moines*	.116	.188	.228	.304	.318	.332	-.216
Montgomery Co.*	.120	.118	.138	.128	.236	.220	-.100
St. Paul*	.120	.132	.172	.214	.280	.290	-.170
Tacoma	.124	.132	.132	.129	.128	.104	.020
Portland	.188	.204	.218	.248	.281	.298	-.110
Stockton*	.246	.442	.598	.544	.710	.562	-.316
Springfield*	.258	.252	.274	.264	.436	.316	-.058
Dayton*	.262	.244	.716	.756	.788	.816	-.554
Boston*	.316	.246	.322	.470	.704	.698	-.382
Milwaukee	.448	.566	.720	.748	.740	.758	-.310
Tulsa*	.464	.462	.444	.500	.414	.428	.036
Buffalo	.468	.642	.678	.686	.694	.684	-.216
San Diego	.518	.516	.494	.474	.486	.488	.030
Dallas	.692	.716	.772	.778	.780	.780	-.088
Houston	.814	.798	.790	.796	.792	.788	.026
$\bar{x}$	.301	.334	.398	.462	.500	.487	-.186
$\bar{x}$ magnet comp.	.207	.233	.327	.419	.480	.457	-.250
$\bar{x}$ magnet only	.419	.460	.487	.517	.526	.525	-.106

*Magnet Component Plan

Table B-6

Interracial Contact (S_{mw})

	1	2	3	4	5	6	7
	1977	1976	1975	1974	1973	1972	1977-1972 ΔS_{mw}
Des Moines*	.791	.740	.717	.649	.636	.629	.162
St. Paul*	.780	.768	.751	.715	.660	.655	.125
Montgomery Co.*	.769	.776	.785	.803	.644	.666	.103
Tacoma	.746	.745	.751	.766	.774	.795	-.013
Racine	.741	.750	.758	.625	.606	.611	.130
Jefferson Co.*	.729	.705	.688	.162	.226	.223	.506
Portland	.706	.705	.700	.683	.669	.656	.050
Montclair*	.551	.551	.530	.529	.548	.555	-.004
Springfield*	.509	.527	.517	.538	.449	.573	-.064
Tulsa*	.462	.468	.484	.431	.509	.505	-.043
Dayton*	.419	.436	.211	.196	.191	.171	.248
Stockton*	.414	.370	.314	.359	.263	.354	.060
Milwaukee	.400	.355	.243	.227	.230	.217	.183
San Diego	.391	.403	.427	.444	.437	.438	-.047
Buffalo	.381	.290	.269	.259	.255	.270	.111
Boston*	.349	.425	.379	.333	.237	.245	.104
Dallas	.228	.227	.203	.207		.220	.008
Houston	.165	.171	.176	.171	.173	.177	-.012
$\bar{x}$	.529	.523	.495	.450	.442	.442	.087
$\bar{x}$ Magnet Comp.	.577	.577	.538	.472	.436	.458	.119
$\bar{x}$ Magnet Only	.470	.456	.441	.422	.449	.423	.047

*Magnet Component Plan

Table B-7

District Values on the Desegregation Index: $\left(\frac{Smw}{D}\right)$

	1977	1976	1975	1974	1973	1972	1977-1972	$\Delta \frac{S}{D}$ 1977-PRE MAGNET YR.
*Montclair 77	8.35	5.10	3.05	2.67	3.38	3.70	4.65	3.25
*Jefferson Co. 75	7.44	4.96	3.31	0.20	0.30	0.30	7.14	7.24
Racine 75	7.41	7.35	8.61	2.25	1.99	2.04	5.37	5.16
*Des Moines 77	6.82	3.94	3.14	2.13	2.00	1.89	4.93	2.88
*St. Paul 75	6.50	5.82	4.37	3.34	2.36	2.26	4.24	3.16
*Montgomery Co. 75	6.41	6.58	5.69	6.27	2.73	3.03	3.38	0.14
Tacoma 67	6.02	5.64	5.69	5.94	6.05	7.64	-1.62	-
Portland 74	3.76	3.46	3.21	2.75	2.38	2.20	1.56	1.38
*Springfield 74	1.97	2.09	1.89	2.04	1.03	1.81	0.16	0.94
*Stockton 70	1.68	0.84	0.52	0.66	0.37	0.63	1.05	-
*Dayton 76	1.60	1.79	0.29	0.26	0.24	0.21	1.39	1.31
*Boston 75	1.10	1.73	1.18	0.71	0.34	0.35	0.75	0.39
*Tulsa 71	1.00	1.01	1.09	0.86	1.23	1.18	0.18	-
Milwaukee 76	0.89	0.63	0.34	0.30	0.31	0.29	0.60	0.55
Buffalo 76	0.81	0.45	0.40	0.38	0.37	0.39	0.42	0.41
San Diego 77	0.75	0.78	0.86	0.94	0.90	0.90	-0.15	-0.03
Dallas 76	0.33	0.32	0.26	0.27	-	0.28	0.05	0.07
Houston 75	0.20	0.21	0.22	0.21	0.22	0.22	-0.02	-0.01
$\bar{X}$	3.50	2.39	2.45	1.79	1.54	1.63	1.89	
$\bar{X}$ Magnet Comp.	4.29	3.38	2.45	1.91	1.40	1.53	2.79	
$\bar{X}$ Magnet only	2.52	2.35	2.45	1.63	1.75	1.74	.776	

* Magnet Component Plan

Table B-8

District Values on the Desegregation Index ($\frac{S_{av}}{D}$): Magnet vs. Non-Magnet Schools

		1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	NM 1977-1972
*Montclair 77	M	7.67	-	-	-	-	-	-	-	-	-	-
	NM	10.31	5.10	3.05	2.68	3.39	3.75	1.51	0.95	1.20	1.02	6.56
*Jefferson Co. 75	M	3.88	2.34	-	-	-	-	-	-	-	-	-
	NM	7.60	5.05	4.71	0.37	0.30	0.30	0.29	0.30	0.23	0.27	7.30
Racine 75	M	26.37	12.7	13.84	-	-	-	-	-	-	-	-
	NM	7.07	7.20	8.42	2.25	1.99	2.04	1.87				5.03
*Des Moines 77	M	22.33	7.30	3.08	1.66	-	-	-				
	NM	7.59	4.75	3.93	2.67	2.00	1.91	2.18	2.19	2.39	1.95	5.68
*St. Paul 75	M	6.29	7.21	3.06	2.42	2.25	?	?				
	NM	6.78	6.17	4.79	3.43	2.37	2.22	2.35	2.61			4.56
*Montgomery Co. 75	M	3.01	2.14	?	?	-	-	-				
	NM	7.72	8.30	5.69	6.27	2.73	3.06	3.10				4.66
Tacoma 67	M	8.43	6.01	4.34	5.11	5.25	6.12	3.05	1.86	0.96	8.74	
	NM	6.95	6.59	7.49	7.62	7.68	9.74	9.76	10.11	9.73	9.11	-2.79
Portland 74	M	2.46	2.08	2.37	4.86	?	?	?	?	?	-	
	NM	4.44	4.22	3.85	2.83	2.29	2.12	1.35	1.43	1.31	1.42	2.32
*Springfield 74	M	0.80	0.90	-	-	-	-	-				
	NM	2.48	2.61	1.89	2.04	1.03	1.81	1.24				0.67
*Stockton 70	M	20.92	-	-	-	-	-	-	-	-	-	-
	NM	1.67	0.84	0.52	0.66	0.64	0.63	0.60	0.60	0.60	0.60	1.04
*Dayton 76	M	1.10	4.66	0.27	-	-	-	-				
	NM	1.60	1.76	0.30	0.26	0.24	0.21	0.17				1.39
*Boston 75	M	1.91	2.23	2.21	-	-	-	-	-	-	-	
	NM	0.90	1.62	1.18	0.71	0.34	0.35	0.33	-	-	-	0.55
*Tulsa 71	M	1.36	1.15	0.92	48.7	8.68	-	-	-	-	-	
	NM	1.03	1.06	1.13	0.84	1.23	1.18	0.63	0.56	0.62	0.59	-0.15
Milwaukee 76	M	1.29	2.16	-	-	-	-	-	-	-	-	
	NM	0.76	0.53	0.34	0.30	0.31	0.28	-	-	0.28	-	0.48
Buffalo 76	M	0.64	4.12	-	-	-	-	-	-	-	-	
	NM	0.85	0.44	0.40	0.38	0.37	0.39	0.38	0.39	0.39	0.39	0.46
San Diego 77	M	0.86	1.36	1.45	1.38	1.73	1.94	4.95	3.67	2.57	3.96	-
	NM	0.76	0.77	0.86	0.93	0.89	0.89	0.90	0.86	0.81	0.84	-0.13
Dallas 76	M	0.22	0.10	-	-	-	-	-	-	-	-	-
	NM	0.34	0.34	0.26	0.27	0.27	0.28	-	0.16	-	0.17	0.06
Houston 75	M	0.57	0.27	0.32	-	-	-	-	-	-	-	-
	NM	0.19	0.21	0.21	0.21	0.22	0.22	0.23	0.24	0.19	0.19	-0.03
Magnet only												
$\bar{X}$ Magnet Schools		5.10	3.60	4.46	3.78	3.49	4.03	4.00	2.76	2.57	3.96	
$\bar{X}$ Non-Magnet Schools		2.67	2.54	2.71	1.85	1.75	1.99	2.41	2.20	2.12	2.35	
Magnet Component												
$\bar{X}$ Magnet Schools		6.93	3.49	1.91	17.59	5.46	-	-	-	-	-	
$\bar{X}$ Non-Magnet Schools		4.77	3.71	2.72	1.99	1.43	1.54	1.24	1.20	1.01	.886	
$\bar{X}$ Magnet Schools		6.12	3.55	3.19	10.69	4.48	4.03	4.00	2.76	2.57	3.96	
$\bar{X}$ Non-Magnet Schools		3.84	3.20	2.72	1.93	1.57	1.74	1.68	1.70	1.61	1.62	

*Magnet Component Plan

APPENDIX C

Table C-1

Correlation Coefficients for Various Elements of Appeal and Effectiveness Measures, Sampled Waters, Elementary and Junior High Level

Element of Appeal	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Program	-0.0726	-0.0574	0.0865	0.0640	-0.1850	0.2100 (.09)	0.0321	-0.1458	0.1124
School Plant	-0.3146 (.03)*	0.1569 (.17)	0.1305	-0.0453	-0.1171	0.4141 (.005)	0.1738	-0.4129 (.005)	0.2024 (.11)
Location	0.3232 (.02)	-0.1889 (.12)	0.0657	0.0264	-0.1049	-0.1859 (.12)	0.1982 (.11)	-0.0459	-0.1985 (.11)
Opportunities for Parent Involvement	-0.0008	-0.3404 (.02)	0.0251	0.1351	-0.1667	-0.0953	0.0875	0.0413	-0.1516
Educational Elements**	0.1585	0.0632	0.0707	0.0259	-0.1020	0.2440 (.09)	0.2152 (.12)	-0.4430 (.006)	0.1502
"Volunteerism"	-0.1092	-0.2929 (.03)	0.2179 (.09)	0.0000	-0.2644 (.05)	-0.1024	0.0707	-0.0844	0.0000
A "Second Chance"	-0.0844	-0.1603 (.16)	0.2070 (.10)	-0.1407	-0.1169	0.1805 (.13)	-0.0270	-0.0960	0.1336

*Where notable, the alpha level appears in parentheses under the correlation coefficient.

**In our correlational analysis of elements of appeal, the elements of program special facilities related to program, principal and faculty were combined into a single measure, Educational Elements of Appeal.

Table C-2

Correlation Coefficients for Various Elements of Appeal and Effectiveness Measures, Sampled Magnets, Secondary Level

Element of Appeal	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Program	NA*	NA	NA	NA	NA	NA	NA	NA	NA
School Plant	0.0443	0.3153 (.12)	0.0679	-0.3111 (.12)**	0.2180	-0.0370	0.0679	0.0679	-0.2037
Location	0.1619	0.0297	-0.1334	-0.2339	0.3801 (.09)	-0.0892	0.0925	0.0138	-0.1510
Opportunities for Parent Involvement	0.2626	-0.0415	-0.1274	-0.1870	0.2697	-0.0548	0.0637	0.0674	-0.1870
Educational Elements***	0.5149 (.15)	0.1106	0.1387	-0.1387	NA	-0.7004 (.06)	0.1387	0.4385	-0.6139 (.10)
"Volunteerism"	0.1583	-0.3840 (.08)	0.1365	0.0280	-0.1820	0.5655 (.01)	0.2357	-0.4596 (.04)	0.2713 (.15)
A "Second Chance"	-0.0000	0.1164	0.1516	-0.0980	-0.0657	0.1335	-0.0379	-0.0124	0.0728

*Analyses could not be conducted on this variable.

**Where notable, the alpha level appears in parentheses under the correlation coefficient

***In our correlational analysis of elements of appeal, the elements of program special facilities related to program, principal and faculty were combined into a single measure, Educational Elements of Appeal.

Table C-3

Correlations of Program Type and Effectiveness, Population of Magnets, Elementary/Junior High

Program Type*	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Academic	-0.2992 (.001)**	0.1217 (.06)	-0.0562	0.0197	0.0472	.0471	-0.1185 (.07)	0.0947	0.0438
Traditional	0.0265	-0.0447	-0.1383 (.04)	0.0493	0.1152 (.07)	-0.0799	0.1491	-0.1016 (.10)	-0.0733
Non-Traditional	0.2448 (.001)	-0.0596	0.2676 (.001)	-0.1707 (.01)	-0.1545 (.02)	0.0462	0.0920	-0.1244 (.05)	0.0292

*There were no vocational programs at this level.

**Where notable, the alpha level appears in parentheses under the correlation coefficient.

Table C-4

Correlates of Program Type and Effectiveness Measures, Population of Magnets, Secondary

Program Type	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Enrollment			
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities	Majority Subscription Rate	Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Academic	-0.1281	-0.1285	-0.2935 (.04)	0.3552 (.01)	-0.0569	0.4123 (.006)	-0.1479	-0.1853	0.4141 (.005)
Vocational	0.0248	0.0048	0.1645	-0.0908	-0.0848	-0.3425 (.02)	0.0635	0.1262	-0.2346

Table C-5

Correlations of Location and Effectiveness Measures, Population of Magnets, Elementary/Junior High

Location	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Minority Neighborhood	0.0105	0.0540	0.0706	-0.0491	-0.0370	-0.1243 (.06)	-0.1451 (.03)	0.2177 (.003)	-0.0519
Majority Neighborhood	-0.0568	0.1214 (.06)	-0.1969 (.005)	0.1028 (.09)	0.1344 (.04)	0.0475	0.0345	-0.0702	0.0316
Mixed Neighborhood	-0.1102 (.08)	-0.0218	0.1036 (.09)	-0.0666	-0.0593	0.1484 (.03)	0.0591	-0.1128 (.08)	0.0461

Table C-6

Correlation of Location and Effectiveness Measures, Population of Schools, Secondary

Location	Ability to Meet Racial Composition Goals	Minority Enrollment				Majority Enrollment			
		Minority Subscription Rate	Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities	Majority Subscription Rate	Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Minority Neighborhood	0.1175	-0.2154 (.10)	0.1463	0.1068	-0.2774 (.05)	-0.0199	0.0564	-0.0261	-0.0398
Mixed Neighborhood	-0.1413	0.3232 (.02)	-0.0544	-0.1601	0.2329 (.08)	0.2342 (.08)	-0.1113	-0.0166	0.1619
Neutral Neighborhood	-0.0212	0.1026	-0.1158	-0.0530	0.1857 (.13)	-0.3566 (.02)	0.0495	0.1895 (.13)	-0.2940 (.04)

Table C-7

Correlations of Attendance Structure and Effectiveness Measure, Population, Elementary/Junior

Attendance Structure	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
City-Wide Draw	-0.1570 (.02)	-0.2399 (.001)	-0.0655	0.1624 (.02)	-0.0720	0.0652	-0.1732 (.01)	0.1053 (.09)	0.0983
Limited Geographic Area	0.0032	0.0859	-0.0895	0.0779	0.0327	-0.0930	-0.0173	0.1286 (.05)	-0.1127 (.08)
Local Neighborhood plus City-Wide	0.02139 (.003)	0.0631	0.0968	-0.1828 (.009)	0.0544	0.0648	0.1693 (.02)	-0.2427 (.001)	0.0489
Local Neighborhood plus Limited Geographic Area	0.0999	0.0694	-0.0264	-0.0423	0.0691	-0.0483	0.2175 (.003)	-0.1348 (.04)	-0.1207 (.06)
City-Wide plus Limited Geographic Area	-0.1481 (.03)	0.1591 (1.02)	0.0330	0.0016	-0.0397	-0.0129	-0.2105 (.06)	0.1299 (.05)	0.0096

Table C-8

Correlations of Attendance, Structure and Effectiveness Measures, Population, Secondary

Attendance Structure	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities	Majority Subscription Rate	Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Citywide Draw	-0.2308	-0.4423	0.0344	0.3903 (.008)	-0.4587 (.002)	-0.1563 (.18)	-0.1224	0.1465	-0.028
Local Neighborhoods plus Citywide	-0.0442	0.1800 (.14)	0.0329	-0.1996	0.1785	-0.0888	0.1829	-0.0166	-0.2125 (.10)
Citywide plus Limited Geographic Area	0.3021 (.04)	0.3495 (.02)	-0.0700	-0.2712 (.05)	0.3699	0.2520 (.07)	-0.0171	-0.1534	0.2087 (.11)

Table C-9

Correlations of "Uniqueness" and "Newness" and Effectiveness Measures, Population, Elementary/Junion High

"Uniqueness"/ "Newness"	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment				Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities	Majority Subscription Rate	Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Unique in comparison with nonMagnets	-0.0229	-0.1388 (.05)	0.0833	0.0440	-0.1336 (.06)	0.0363	0.0214	0.0834	-0.1102 (.10)
Unique in comparison with other Magnets	0.0271	-0.0597	0.0202	0.0072	-0.0300	0.0012	-0.0369	0.0199	0.0236
Newly Developed Program for Market Desegregation	0.0980	-0.0335	0.0908	-0.0091	-0.0969	-0.0479	-0.0017	0.0177	-0.0163
Established Program prior to Magnet Desegregation	0.1274 (.05)	-0.0799	-0.0493	0.0539	0.0080	-0.0866	0.0230	0.0973	-0.1284 (.05)

Table C-10

Correlations of "Uniqueness" and "Newness" and Effectiveness Measures, Population, Secondary

"Uniqueness"/ "Newness"	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Unique in comparison with nonmagnets	0.1914	0.0725	0.0923	-0.0781	-0.0168	-0.0697	-0.2382	0.1985	0.0640
Unique in comparison with other magnets	-0.1140	0.0117	0.1016	-0.1142	0.0102	-0.0921	-0.0288	0.0739	-0.0541
Newly Developed Program for Magnet Desegragation	-0.1111	-0.0207	0.2043 (.11)	-0.0175	-0.2079 (.11)	-0.1228	0.2382 (.08)	-0.1105	-0.1684
Established Program prior to Magnet Desegragation	0.3052 (.03)	0.3839 (.009)	-0.0406	-0.3380 (.02)	0.4092 (.005)	0.2195 (.19)	-0.0064	-0.1071	0.1387

Table C-11

Correlations of Special Assignment of Principal and Staff and Effectiveness Measures, Sample, Elementary/Junior High

Special Assignment	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Principal Specialty Assigned	-0.1478 (.18)	-0.0263	0.0737	0.0198	-0.1124	0.1823 (.13)	-0.0205	-0.1143	0.1521 (.17)
Staff Specially Assigned	-0.1021	-0.0850	0.1567 (.17)	0.0309	-0.1650 (.16)	0.1596	-0.0160	-0.1409	0.1666 (.16)

Table C-12

Correlations of Special Assignment of Principal and Staff and Effectiveness Measures, Sample, Secondary

Special Assignments	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
Principal Specially Assigned	0.0124	0.4268 (.05)	0.2917 (.13)	0.0327	-0.3499 (.08)	-0.4193 (.05)	0.0556	-0.0704	-0.0215
Staff Specially Assigned	-0.2392	-0.0626	0.2887 (.14)	-0.3333 (.10)	0.0000	-0.0644	0.0000	0.1491	-0.2182

Table C-13

Relationships Between Special Assignment of Staff and Problems Recruiting Minorities and Majorities

Grade Level	Special Assignment	N	Problems Recruiting Minorities	Problems Recruiting Majorities
Elementary/ Junior High	Of Staff		-0.0422	0.2615 (.05)
	Of Principal		-0.0574	0.4124 (.005)
Senior High	Of Staff		-0.2680 (.15)	0.3351 (.09)
	Of Principal		0.0000	0.3612 (.09)

Table C-14

Distribution of Degree Parent Involvement

Degree	Elementary/Junior	Senior	Total
Low	4	8	12
Medium	19	2	21
High	15	1	16
Total Responding	38	11	49
Total Sampled	43	17	60

Table C-15

Correlations Between Degree of Parent Involvement And Attendance Structure, Sample Elementary/Junior High

ade val	Ability to Meet Racial Composition Goals	Minority Subscription Rate	Minority Enrollment			Majority Subscription Rate	Majority Enrollment		
			Ability to Meet Minority Enrollment Goal	Tendency to Underenroll Minorities	Tendency to Overenroll Minorities		Ability to Meet Majority Enrollment Goal	Tendency to Underenroll Majorities	Ability to Overenroll Majorities
mentary/ ior High	-0.1854 (.14)	-0.2308 (.09)	-0.0456	0.2031	-0.1388	0.0685	-0.1854 (.14)	0.2031 (.11)	0.0243

APPENDIX D

Table D-1

Selected Program Characteristics for All Magnet Schools

Type of Program	Grade Level				Location of School					Attendance Area						Program Uniqueness			
	Elementary/Primary	Middle/Jr. High	Secondary/Sr. High	Total	Minority Area	Majority Area	Racially Mixed Area	Neutral or Other Area	Total	Citywide	Limited Geographic Area	Neighborhood First, Then Citywide	Neighborhood First, Then Limited Geographic Area	Limited Geographic Area First, Then Citywide	Total	Unique Within the District	Not Really Unique, But Different in Some Way(s)	Not Unique At All	Total
Visual/Performing/ Creative Arts	12	4	3	19	6	5	6	2	19	12	0	4	1	2	19	1	5	12	18
Careers/Vocations	3	3	16	22	5	6	3	6	20	13	0	7	0	2	22	0	3	19	22
Science/Math/Technology	9	2	7	18	8	6	2	0	16	9	0	3	1	5	18	0	3	10	13
Language/Humanities/ Multicultural	18	3	2	23	6	10	5	1	22	8	2	2	4	7	23	3	6	12	21
Academic/Honors	11	6	5	22	6	6	5	3	20	17	0	3	0	2	22	1	5	8	14
Core Traditional	50	9	1	60	26	10	8	10	54	20	0	33	4	2	59	2	26	31	59
Traditional	35	3	3	41	17	13	6	1	37	16	0	15	5	4	40	6	25	6	37
Other	18	0	4	22	2	2	1	2	7	4	15	1	0	2	22	0	1	5	6
Total	156	30	41	227	76	58	36	25	195	99	17	68	15	26	225	13	74	103	190

Table D-2

Magnet School Characteristics by District, 1977

School Characteristics	Boston	Buffalo	Dallas	Dayton	Des Moines	Houston	Jefferson County	Milwaukee	Montclair	Montgomery County
TYPE OF PROGRAM:										
Visual/Performing/Creative Arts	2	1	2	-	-	8	-	3	-	-
Careers/Vocations	2	1	6	1	-	1	-	8	-	-
Science/Math/Technology	4	-	1	-	-	8	-	3	-	1
Language/Humanities/Multicultural	7	-	-	1	-	5	-	2	-	5
Academic/Honors	2	1	3	-	-	11	-	2	2	-
Non-Traditional	2	5	2	2	2	3	3	20	-	4
Traditional	1	2	2	3	-	2	4	6	1	5
Other	17	1	-	-	-	2	-	-	1	-
TOTAL	37	11	16	7	2	40	7	44	4	15
GRADE LEVELS:										
Primary/Elementary	24	11	5	7	2	27	4	22	4	14
Middle/Junior High	3	-	5	-	-	4	1	14	-	1
Secondary/Senior High	10	-	6	-	-	9	2	8	-	-
TOTAL	37	11	16	7	2	40	7	44	4	15
PERCENT OF ALL STUDENTS SERVED*	32%	13%	7%	8%	4%	8%	3%	41%	31%	5%
LOCATION OF SCHOOL:										
Minority Area	8	4	2	2	1	21	2	11	1	1
Majority Area	3	1	1	2	-	11	-	21	2	11
Racially Mixed Area	5	-	5	2	1	6	-	11	-	3
Neutral/Other Area	4	6	7	-	-	-	3	-	1	-
TOTAL	20	11	15	6	2	38	5	43	4	15
ATTENDANCE AREA SERVED:										
Citywide	-	8	6	7	-	40	1	12	4	1
Limited Geographica Area	15	-	-	-	-	-	-	-	-	1
Neighborhood First, Then Citywide	-	-	-	-	2	-	2	32	-	-
Neighborhood First, Then Limited Geographic Area	-	3	10	-	2	-	1	-	-	13
Limited Geographic Area First, Then Citywide	22	-	-	-	-	-	-	-	-	-
TOTAL	37	11	16	7	4	40	4	44	4	15
PROGRAM UNIQUENESS:										
Unique Within the District	11	9	8	1	2	12	3	20	3	6
Not Really Unique, But Different in Some Way(s)	5	2	1	4	-	14	1	23	1	8
Not Unique At All	5	-	1	2	-	14	3	1	-	1
TOTAL	21	11	10	7	2	40	7	44	4	15
TOTAL NUMBER OF MAGNET SCHOOLS	37	11	16	7	2	40	7	44	4	15

*Percentages reflect the enrollment of the entire school even if the magnet program is only a part of the school.

Table D-2 (cont.)

Magnet School Characteristics by District, 1977

School Characteristics	Portland	Racine	Saint Paul	San Diego	Springfield	Stockton	Tacoma	Tulsa	TOTAL, ALL DISTRICTS
TYPE OF PROGRAM:									
Visual/Performing/Creative Arts	1	1	1	-	-	-	-	-	19
Careers/Vocations	-	-	-	3	-	-	-	-	22
Science/Math/Technology	-	-	-	1	-	-	-	-	18
Language/Humanities/Multicultural	1	-	-	2	-	-	-	-	23
Academic/Honors	-	-	-	-	-	-	-	1	22
Non-Traditional	6	1	2	1	1	2	3	3	64
Traditional	-	1	1	5	4	1	1	-	39
Other	1	-	-	-	-	-	-	-	22
TOTAL	9	3	4	12	5	3	4	4	227
GRADE LEVELS:									
Primary/Elementary	6	3	4	10	5	3	4	4	159
Middle/Junior High	-	-	-	-	-	-	-	-	28
Secondary/Senior High	3	-	-	2	-	-	-	-	40
TOTAL	9	3	4	12	5	3	4	4	227
PERCENT OF ALL STUDENTS SERVED*	11%	2%	6%	8%	11%	2%	7%	4%	
LOCATION OF SCHOOL:									
Minority Area	6	3	2	4	3	-	2	4	77
Majority Area	-	-	-	5	-	-	2	-	59
Racially Mixed Area	2	-	1	-	2	1	-	-	39
Neutral/Other Area	1	-	1	-	-	2	-	-	25
TOTAL	9	3	4	9	5	3	4	4	200
ATTENDANCE AREA SERVED:									
Citywide	-	3	1	7	-	3	-	2	101
Limited Geographica Area	-	-	-	-	-	-	-	-	16
Neighborhood First, Then Citywide	9	-	2	-	5	-	2	2	67
Neighborhood First, Then Limited Geographic Area	-	-	1	-	-	-	2	-	16
Limited Geographic Area First, Then Citywide	-	-	-	-	-	-	-	-	22
TOTAL	9	3	4	7	5	3	4	4	222
PROGRAM UNIQUENESS:									
Unique Within the District	7	3	3	7	1	3	3	2	104
Not Really Unique, But Different in Some Way(s)	2	-	1	5	4	-	-	2	73
Not Unique At All	-	-	-	-	-	-	-	-	27
TOTAL	9	3	4	12	5	3	3	4	204
TOTAL NUMBER OF MAGNET SCHOOLS	9	3	4	12	5	3	4	4	227

*Percentages reflect the enrollment of the entire school even if the magnet program is only a part of the school.